Volume VII, No. 12 66 December, 1931

SOAP

with which is included an

Insecticide & Disinfectant Section

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Standardize on
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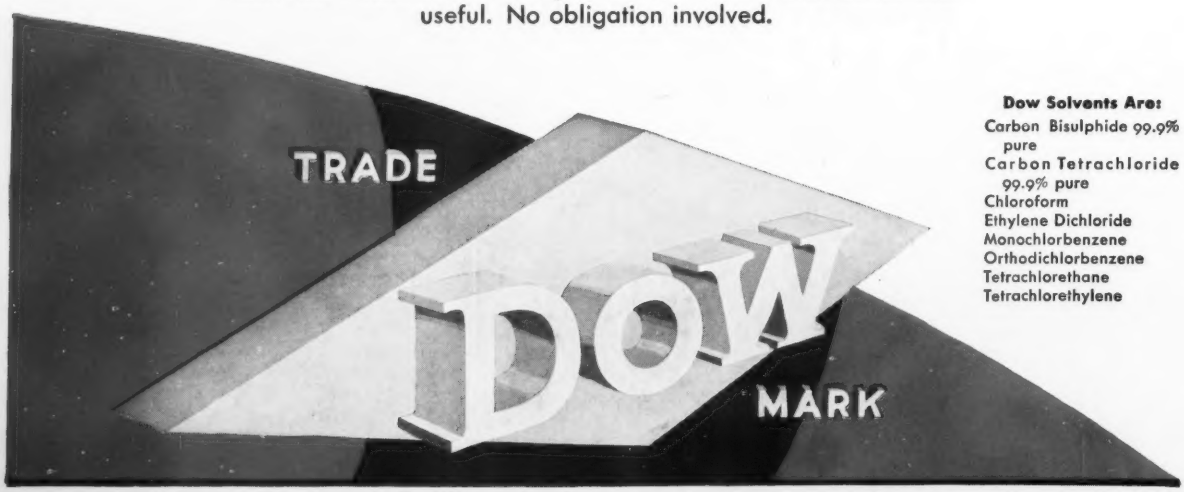

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Insecticide & Disinfectant Section **Oil & Fat Section**

Volume VII December, 1931 Number 12

«

INSECTICIDE and Disinfectant Section, which is included as a department of every issue of SOAP, begins on page 95. Oil and Fat Section begins on page 75. These sections contain news, articles and editorial opinion of particular interest to their respective industries.

«

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Published monthly on the 15th by

MACNAIR-DORLAND COMPANY, INC.

Ira P. MacNair Grant A. Dorland

136 LIBERTY STREET PUBLISHERS NEW YORK, N. Y.

Subscription rate $3.00 per year. Canadian, $5.00. Copy closing dates—7th of month of issue for reading matter and 25th of month preceding month of issue for display advertising. Entered as second-class matter, April 11, 1931, at Post Office, New York, N. Y., under act of March 3, 1879. Circulation, November, 1931, issue 3,002 copies. Total Distribution 3,300.

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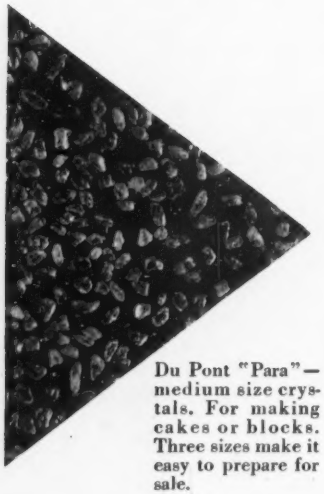

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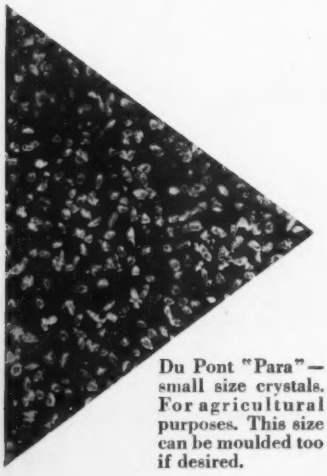

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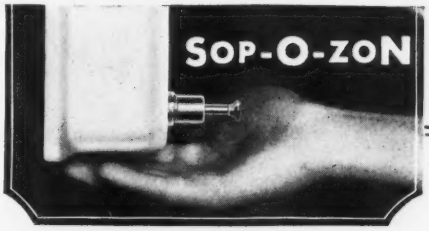

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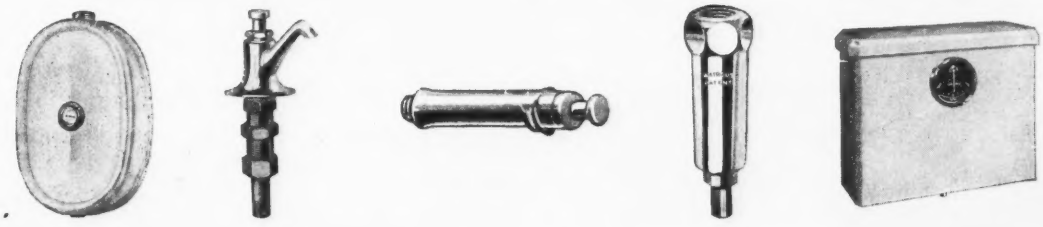

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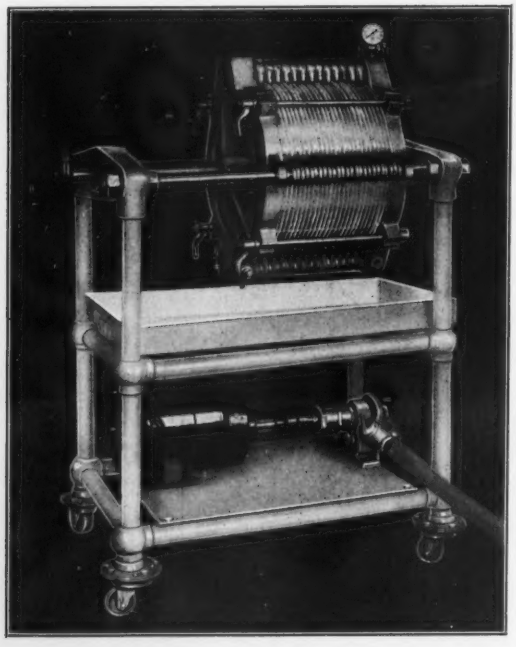

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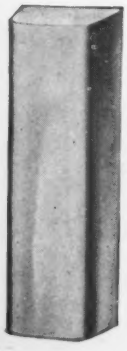

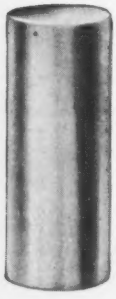

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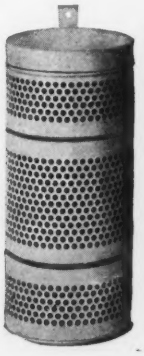

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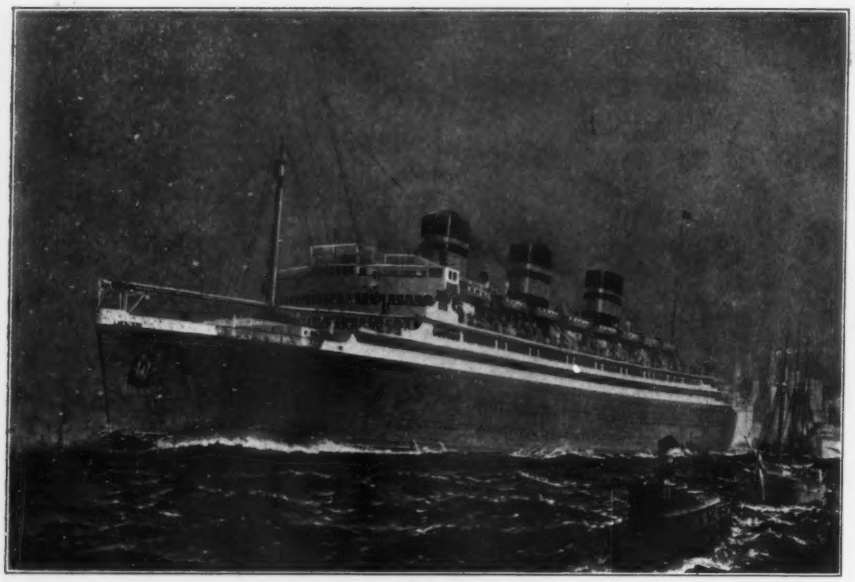

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SOAP

VOLUME SEVEN NUMBER TWELVE

Prisons In The Soap Business

ONLY a few years ago, a state prison soap factory was abandoned and the equipment sold by a used machinery dealer. The operations, as we remember it, were unsatisfactory, the quality of the soap was poor, and costs were higher than the soap could be bought on the open market. Now, we have the opposite,—in two cases of which we have heard, soap plants are going to be installed in state prisons. In a sense, we are glad to see the opportunity for the sale of new soap-making equipment. At the same time, the glaring weaknesses of prison soap manufacture from the economic point of view, are self-condemning from the very outset.

Of course, prison-made soap looks attractive to the politicians right now. With fats and other raw materials at low ebb in price, why wouldn't it? Soap can be made considerably cheaper now than two years ago. At the same time, it can also be bought a lot cheaper. But what of two years hence? There is every reason for believing that price advances in raw materials, especially fats, will be greater between now and then, than the advance in soap prices.

In all likelihood, the officials of the new plants will unearth much the same conditions after a few years' experience as were found in the prison factory which was abandoned. Economical and efficient manufacture of a commodity such as soap does not seem to be probable in any politically controlled undertaking. Even though we completely ignore the question of the justice and injustice of state competition with private enterprise, the peculiarities of soap making, in our opinion, make it impracticable for penal institutions. In these specific cases, the immediate prospects for success may be good, but the inevitable readjustment of raw material costs will probably change the whole aspect of the venture in a year or two.

—o—

Rendering Versus Soap Making

THE low prices of tallow and greases which have been ruling for many a month past seem to comprise almost an invitation to renderers to enter the soap business. Reports that several rendering organizations are contemplating soap manufacture have come to us from various parts of the country. It seems that they feel there is more money to be made,—or rather, less money to be lost,—by selling their tallow as soap. The line of endeavor would probably be in regular laundry chip, for it is difficult to see how manufacture in the bar laundry and toilet fields could be got under way without innumerable distributing and marketing complications.

The prospect of additional manufacturers in the bulk soap field is not at all pleasing to those now in the business. The price of laundry chip has been the soap industry football thus far in the keen competition for reduced volume of laundry demand. Additional competition under present conditions is not going to help matters a great deal. It is merely go-

ing to drive low prices still lower. Newcomers in the field will have to cut prices to make their entry. Price cuts will not find the established producers standing idly by, but unquestionably will see them prepared to maintain the business which they consider theirs.

We can readily see the prospects for an unpleasant situation if there is any general movement of renderers into soap manufacture. The present differential between fat and soap can be wiped out overnight. It would then be a case of renderers losing money on soap in addition to a continuation of losses on tallow and grease outputs. That it would be distinctly to the advantage of the soap industry if the price of tallow and grease were materially higher seems to be evident under present conditions. If an influx of new competition could be stemmed, higher costs on some raw materials would represent actual economy. Nevertheless, as long as there is a material differential between the tallow market and the price of soap, and tallow is being sold at the same time at a loss, there is no doubt but that a standing invitation to the renderers to enter the soap business exists. It was just such a situation as the present one which put the meat packers into the soap business some years ago. They could not get the price for their tallow so they sought profits by making it into soap. As we see it, the way to shut the door today is to prevent a duplication of the situation by giving the renderers a price for their fats which will discourage their ideas of soap manufacture.

—o—

Don't Junk Your Line!

BROAD reduction in prices in all classes of commodities has brought a cheapening of products in many cases, the like of which we have not viewed for many a day. There is no doubt, quality for quality in most lines, that prices have been lowered, but in many lines where the lessened quality is not so apparent to the casual observer, much low grade merchandise has come out. All sorts of catch-penny junk is being offered in place of what has ordinarily been considered standard merchandise. The person who spends a dime readily but hesitates to spend a quarter, is being appealed to. The appeal, however, is legitimate only where the same product, but less of it, is offered for that dime. Something of equal size or amount which *looks* to be about the same but is in reality only a low grade makeshift for the original, has no place in spite of the fact that this has become very common of late.

There are still houses in business who really guard the quality of their goods. With them, if the price is cut at all, it is a legitimate cut and not a subterfuge. Reports are about that some houses have not changed their prices materially but have actually improved their products in keeping with lower costs. If prices have to be cut at the expense of quality of goods or package, the manufacturer who cuts them is laying the foundation for much grief for the future of his business.

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The recent death in New York of John Rodriguez, widely known essential oil broker, brings out vividly the inexorable march of time and the imprint which it leaves on our daily lives. Rodriguez, although not an old man by any means, was one of the "old school" in the American essential oil trade. He was a member of that inner circle of old-timers, the ranks of which have been thinned during the past five years by death. With the passing of Charley Meehan of Stillwell, Harry Howe of D & O, others, and now Rodriguez, the group has seen its membership dwindle. Gradually the business passes into the hands of the younger generation as time goes on. Twenty-five or thirty years ago, these men of the "old school" were the younger generation,—and twenty-five years from now, all of us in the present younger generation will be the old-timers.

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The one-track mind could conceive of nothing but the rosiest optimism back in 1929. Everything was milk and honey. How could it ever be otherwise again? The selfsame mind today can conceive of nothing but darkness either here or ahead. Things are bad, and are going to get worse. How is it possible for them to improve? The same type of argument which was

(*Turn to Page* 55)

A new method for boiling toilet soap in small batches was patented in 1884

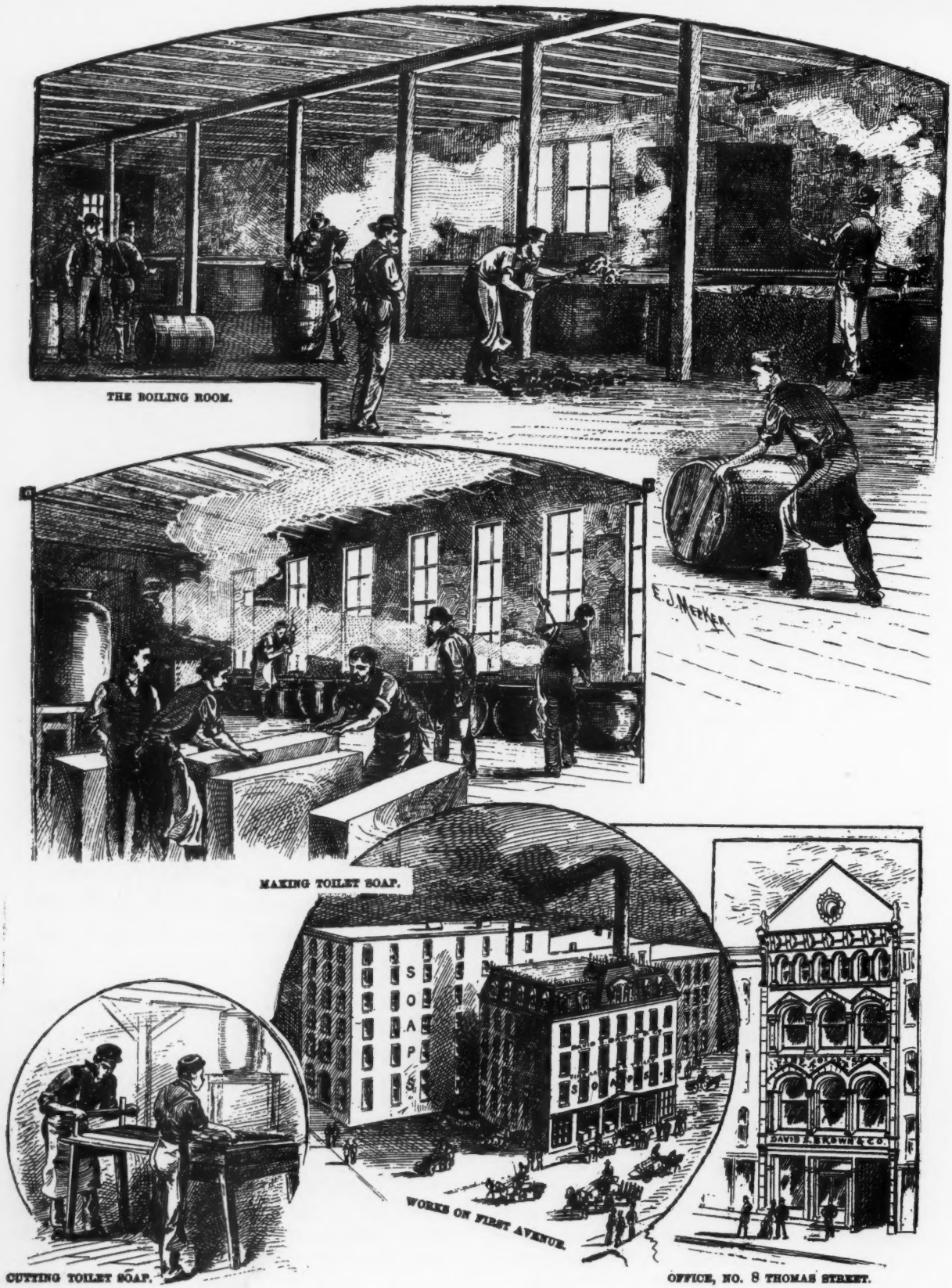
Pioneers of American Toilet Soap Manufacture

Milled Toilet Soap is reputed in this account to have been first made in the United States about 1840. The manufacturing methods of David S. Brown & Company in 1879 are described and pictured.

MILLED toilet soaps are stated to have been made in the United States for the first time about 1840, which is close to a hundred years ago. The method of manufacture was generally known then as the "French Process" and is still referred to by this name today. The process originated in France as its title would indicate and had been used there for some years prior to its adoption in England and the United States. France was the world's supplier of fine toilet soaps back in the forties and fifties. Even after the manufacture of milled soaps started in America, France continued to supply the bulk of the demand for fine perfumed toilet soaps in this country. The impression that France alone could make a really fine toilet soap became deeply imbedded in the American mind through the half-century during which French soaps dominated the market. It is an impression which is held today by many people in spite of the fact that the great bulk of toilet soap demand is now supplied by domestic manufacturers.

In an article which appeared in the *New York Graphic* for December 31, 1879, a description of the processes being used in the plant of David S. Brown & Company, New York soap makers, is given at some length. It tells of the plant being established on Peck Slip in Downtown New York in 1808. This was just two years after the Colgate factory had been started on Dutch Street by William Colgate, a stone's throw from Peck Slip. The success of the Colgate business was probably something of a factor in the Brown plant getting under way. Where the original David Brown learned the soap business, whether as an employe of Colgate or elsewhere, is not clear from the record.

In 1879, Brown was well established in the milled soap business. He had started thirty-five or forty years before. The success of French milled toilet soaps in the American market and



Scenes from the old Brown soap factory in lower New York

the much higher prices which they brought, were undoubtedly the factors which carried the most weight. Even so, the demand for soaps in the American market was mostly for the all-purpose yellow bar. Toilet soaps were a luxury. Their production and sale on a large scale, their general use, did not come until many years later. In fact, it was some sixty or seventy years after Brown started to make milled soaps before a real expansion in tonnage took place. During the past twenty years, the greatest expansion in toilet soap output and consumption in the United States have taken place.

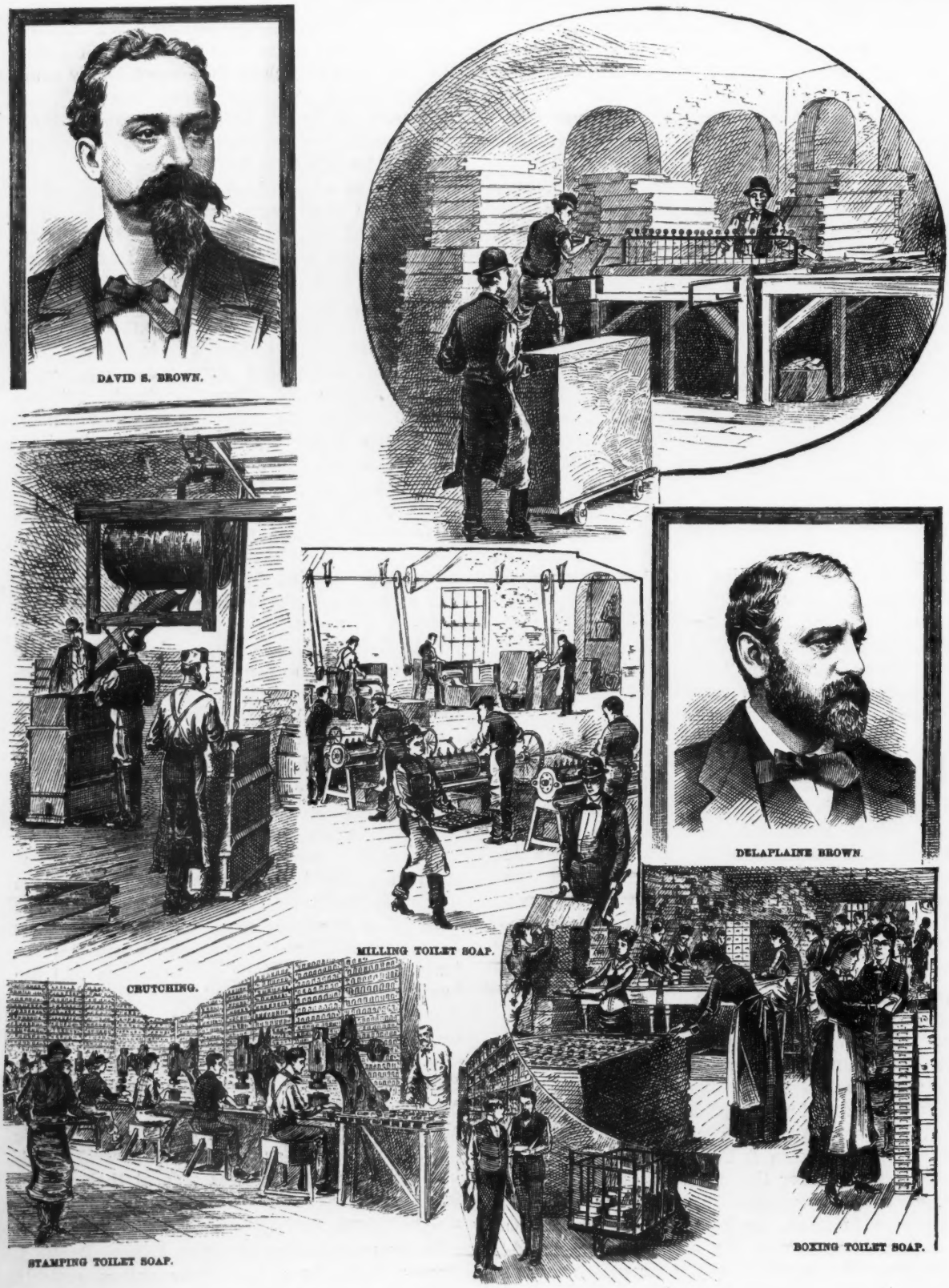
Between 1860 and 1880 in the United States, capital invested in soap and candle manufacture more than doubled. In 1860, the figure was $6,350,000. In 1880, it had grown to $14,540,000. Value of production in 1860 was $18,465,000, and in 1880, it was $26,555,000. This compares with a figure close to $400,000,000 today. Labor employed in 1860 amounted to 3,247 persons; in 1880, 5,289 people. Wages in 1860 averaged $330 per year and in 1880, $420 per year. The increase in persons employed was less than the rate of increase of output and the growth of invested capital, reflecting probably the gradual improvement in manufacturing methods and in plant equipment. These figures give an idea of the possible extent of toilet soap operations at the Brown factory in the early days of milled soap manufacture as compared with the extent of production today.

REALLY few basic changes in soap manufacture have taken place since the days of the Brown plant in 1880. This is one of the surprising things about soap manufacture. Refinements have been numerous, but basic changes almost nil. The detailed description of the methods of 1879—52 years ago—bears this out. The article in *The Graphic* of a half century ago, stated:

"We give in this number of *The Graphic* a full page of carefully prepared illustrations which, together with the following explanations and descriptions, will serve to convey quite distinctly the various manipulations that all kinds of soap, from that used for scrubbing purpose to the delicately tinted and perfumed of the refined boudoir, have to pass through. The old and large house of David S. Brown & Co. has been in this instance selected for the purposes named, as this house was the original manufacturer of toilet soaps in America. In fact, the founder of the soap business in this city was the great-grandfather of the members of the present house of David S. Brown & Co. In 1808 the business was established on the premises No. 10 Peck Slip, shown in the picture, which is still used by the firm as their exporting depot. As a historical fact, it is stated in connection herewith that the deed of this site dates back to the time of Queen Anne, for this branch of the Brown family came from England, two brothers of them, to Massachusetts, early in the seventeenth century. The grandfather of David S. and Delaplaine Brown, who comprise the firm now, lived to the ripe old age of eighty-seven, and continued to oversee his soap manufacture until within a few days of his death. He was virtually the founder of the toilet soap business in this country. The father of the present firm improved and enlarged the business, but was cut short in his career by being killed at about the age of thirty years, while on his way to a fire. The old works, established fifty years ago, were located at No. 24 Chrystie street, but being inadequate to the increasing business, about ten years ago the present location, as shown in the illustration, at Nos. 185, 187 and 189 First avenue, No. 421 East Twelfth street, and Nos. 337, 339 and 341 East Eleventh street was selected and occupied. The large building, six stories in height and fronting on three streets, is entirely occupied for soap making purposes. The downtown business office and salesrooms are at No. 8 Thomas street, a sketch of which is also given. The business in all its details is under the management of the firm—Mr. Delaplaine Brown by education and experience being well qualified to superintend the manufacturing department, and D. S. Brown the designing of styles, etc.

As stated, the founder of this house introduced the manufacture of toilet soaps here, and thirty-five or forty years ago the house was manufacturing those soaps for nearly every prominent house in the country, and was the only house forty years ago that made toilet soap, and since that date the larger number of those who have undertaken to make such soaps have passed out of existence. When the toilet soaps were first introduced the public took to the article and the business rapidly augmented. As good as those from foreign countries was the general verdict. Previous to their introduction the finer quality of soap used was that known as Castile, principally brought from Mediterranean ports, and made with neutral alkali; family soaps were made with caustic alkali; toilet soaps are made with neutral alkali, but little of the latter was seen at that date, a few French people only bringing the coveted article with them.

In the manufacture of soaps, Messrs. David S. Brown & Co. have a style or system entirely their own. Their pioneership in the matter of toilet soap has been supplemented by their successful endeavor to concentrate all soap manufac-



Old prints of David and Delaplaine Brown and their plant in 1879

ture into a specialty—a laundry soap that cannot be beaten. This soap is known everywhere as David's Prize Soap. Other classes now are more or less competitive. In the matter of novelties, Mr. D. S. Brown claims to be the inventor and originator, although most other manufacturers have followed in his lead. Two years ago in this line, in the shape of dolls, images and other ingenious novelties cut out of toilet soap by ingeniously constructed and costly dies, Messrs. D. S. Brown & Co. were the only ones in the market, and tons of this class of goods are now being turned out, and they yet lead the trade in this direction.

Some idea may be formed of the immensity of the business done by the firm alluded to when it is known that they use seven kettles or vats, holding from 80,000 to 100,000 pounds of soap each. The boiling room, which is shown in the drawing, contains these large vats or tanks. Steam pipe coils cover the bottoms of them, all the boiling being done by steam. The soap has to be boiled about five days—it is a knack of the trade to know when enough—and it must then stand about five days more to settle before the mixture can be run off into the crutching machines, which are also shown in the accompanying series of pictures. This crutching process is much after the manner of churning and serves to eject the heat. In olden times it had to be done by hand. There are arms in the interior of the crutcher for the purpose of agitating the mass until it is sufficiently cooled to be run into the frames, which hold about 1,000 pounds each. When cooled sufficiently, the frames are removed, leaving the large solid blocks of soap intact. This cooling process occupies, under favorable circumstances of temperature, about two days. These solid blocks are then cut up into slabs and bars, the best of piano wire manipulated by two men being used for that purpose, as will be seen in the illustration. From the cutting table the soap goes to the boxes, and is ready for market if it be for laundry purposes.

THERE are two processes or systems for making toilet soap, the English and French. The cheaper grade or English is done by remelting. To accomplish this the soap is placed in jacketted or double kettles—a kettle within a kettle, the inner one being several inches from the outer so as to give ample room for the steam to circulate, none of which ever mingles with the soap. This class of soap is of pure quality when remelted, but not susceptible of the fine finish and odors as that made by the French process.

The French or milling process is the most entertaining of the whole business. To begin with, the soap must be made of the best quality of materials, and thoroughly neutral as to alkali. After being boiled and cooled, it has to be thoroughly cut and dried before it is in proper shape for the mill. This done, it is cut into shavings by a slicer, as seen in the picture, and thrown into tin-lined boxes, where it receives its color and perfume, the soap shavings being now perfectly cold and hard. From the box they are taken to the "mill," a machine composed of three large granite rollers, set in the form of a triangle, between which the shavings are passed so firmly that the colors and perfume are thoroughly impregnated. For the first time the sheets as they pass from the rollers are spotted and uneven, but the operation is continued until perfection and evenness are secured, every particle being grooved as fine as the most delicate silk ribbon, these latter processes also being fully shown in the illustrations. Now comes an instance in the manufacture where much power is called into requisition, as from the "mill" the thin sheets or shavings are taken into the French *peloteuse* or English plodder—a large iron cylinder horizontally arranged, with a rammer or plunger that is forced in by powerful screws. The plodder being filled, the screws are applied and the mass is ejected from the opposite end in bars or any shape that may be arranged for in the die therein. Those who have noticed the operating of a large sausage machine have a fair illustration of this part of the manufacturing process. After the soap, colored and perfumed as it now is, has been ejected, as described, from the reverse of the plodder, it is put into any shape desired by being pressed between upper and lower dies, which also imprint upon it any form or figure that the manufacturer may designate. But first it has to be "skinned," that is, laid upon racks or frames and given a chance for the air to form upon it a kind of coating or skin that is noticeable upon any of the better class of soaps, otherwise the impressions from the dies would not be perfect.

AFTER these processes have all been finished the soap being now thoroughly dry is, after being trimmed in the case of novelties, ready for market. Passing into the boxing room, rows of girls are seen sitting along lines of tables removing from the figures the rough edges. Thence it is sent to the stock and packing rooms. Space is too limited to allow of entire details in describing the operations of this large manufactory, but when it is considered that from 80 to 100 people are employed in the making of toilet soap alone, an idea may be formed of the progress within the last forty years of this branch of

(*Turn to Page* 40)

1768-1931 *1768-1931*

The House of Antoine Chiris

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ITS SINCEREST WISHES
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Say you saw it in SOAP!

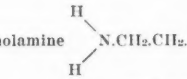
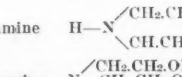
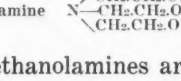
Some Industrial Applications of

ETHANOLAMINE SOAPS

By PAUL I. SMITH

SOAPS made from organic bases and fatty acids are finding very valuable applications in several important industrial fields. The moment seems opportune to examine these new detergent agents from a technological standpoint and to pass an opinion concerning their respective merits and potentialities. Triethanolamine is the principal material used in the preparation of special organic base soaps. The commercial grade of the above chemical is known as ethanolamine and it contains approximately 75-80% triethanolamine, 20-25% diethanolamine and 0.5% monoethanolamine.

The three ethanolamines are similar in their general chemical and physical properties. The chemical structures of the bases are represented by the following arrangements.

		Approx. Mol. Wt.	Boiling Pt.
Monoethanolamine		61.07.	171°C.@ 757 m. m.
Diethanolamine		105.12.	217°C.@ 150 m. m.
Triethanolamine		149.16.	277°C.@ 150 m. m.

The ethanolamines are freely soluble in water, alcohol, acetone and other common solvents, excluding ethyl ether. The mono-variety is a colorless and fairly heavy liquid resembling weak ammonia in odor. The diethanolamine is a completely odorless liquid, while the third member of the family is a white crystalline solid quite devoid of smell. All three ethanolamines are decidedly basic in reaction and when in aqueous solution, they are strongly alkaline to phenolphthalein. They form soaps with fatty acids, especially liquid ones such as oleic acid, and these all have the well defined properties of ordinary soaps together with several unusual characteristics.

Ethanolamine soaps are fairly simple to prepare and the following data supplied by Ralf B. Trusler (*Industrial & Engineering Chemistry*, July, 1929: *Soap*, September 1929) is of interest in this connection. "The liquid fatty acids, such as oleic acid, permit the easy preparation of ethanolamine soaps. For example, let us consider the preparation of ethanolamine oleate from the technical oleic acid, which may be either the saponified or the distilled variety. Analyses of distilled oleic acid have shown it to have an acidity of 97.5% in terms of oleic acid, and the ethanolamines have been found to have such an alkalinity that 100 grams will combine with 215 grams of pure oleic acid. Then for every 100 kg. of ethanolamine there must be added 219/97.5 or about 220.511 kg. of oleic acid."

The reaction is usually carried out in a steam jacketed crutcher provided with slowly revolving but adequate stirring gear. In all cases, scrapers should be provided with the ordinary horizontal blades as the agitation is more thorough and the reaction complete. The fatty acid is best heated to about 65-70° C. and the organic base also at that temperature added to the crutcher very slowly and well mixed with the fatty acid. The preparation of ethanolamine soaps from solid fatty acids is a little more troublesome than when liquid fatty acids are employed. There should, however, be little real difficulty in obtaining uniform results. The manufacture of these special soaps is much simpler than the manufacture of ordinary hard soda soaps, as the former may be accurately controlled and the proportions of ethanolamine and fatty acid calculated from the chemical equation.

THE ethanolamine soaps vary in consistency from hard, crystalline solids to a soft, transparent jelly having the appearance of petrolatum or petroleum jelly. The soaps are soluble in practically all solvents and even heavy petroleum products will dissolve appreciable proportions of ethanolamine soap. Water solutions of the above may be translucent gels or heavy emulsions. The condition of the solution depends upon the percentage of soap present. The ready solubility of ethanolamine soap in practically all the important solvents renders it of great service in many cases where ordinary soda soaps are not practicable.

The most pronounced and important property of ethanolamine soaps is their power of emulsifying oil and water mixtures. This unique ability

of the soap is now widely utilized in commerce. Emulsions for the lubrication of wool are commonly made from olive oil, water and oleic acid. The presence of triethanolamine in such a mixture enables the emulsion to be formed far easier than would otherwise be possible and in addition renders the emulsion stable and lasting. As the ethanolamine soaps are freely soluble in water, it is easy to appreciate that the lubricating mixture may very simply be removed from the wool fibre in the later steps of the process. It is claimed that wool lubricated with olive oil emulsions containing ethanolamine soap is softer and smells sweeter than wool treated with fatty mixtures devoid of ethanolamine. Owing to the low alkalinity of this base, there is no risk of damage to delicate textiles and this is a very valuable recommendation.

IN the fat-liquoring of leather, both vegetable and mineral tanned, ethanolamine soaps are of great value. They enable stable and penetrative emulsions to be formed which have remarkable lubricating action on the skin fibres. The usual practice is to drum the tanned or dyed leathers in solutions of sulfonated or soluble oils containing in addition a little free soda soap and mineral oil. It is found that while these emulsions are superficially suitable, they do not possess the desired lubricating action—in other words, they do not penetrate sufficiently into the actual pores of the leather. Obviously the trouble lies in the size of the oil particles in suspension. Now ethanolamine soap renders possible a very finely dispersed emulsion and the appreciable lowering of the surface tension of the fat-liquoring solution. Leather experts are now advocating the use of ethanolamine soaps in fat-liquor mixtures. An excellent suggestion for a good quality neatsfoot oil emulsion may be given at this stage.

Neatsfoot oil	88 lbs.
Oleic Acid	10 lbs.
Triethanolamine	2 lbs.
Water	50 lbs.

The above ingredients are mixed together and well agitated. The best plan is to mix the triethanolamine and water first, then add the neatsfoot and oleic acid previously mixed and warmed. The product will keep indefinitely and will mix with water in all proportions to form excellent emulsions.

Emulsions of ethanolamine soaps and heavy mineral oils may be used to advantage in the tanning of light and heavy leathers when it is desired to carry out the same with concentrated extracts. The presence of oil emulsions prevents the case hardening of the leather during the tanning and lessens grain contraction and disfigurement. It also renders the penetration of the tannins complete in a shorter interval of time. Only a small proportion of such oil emulsions is desirable and 2-5% may be quoted as working percentages.

IN the preparation of pigment finishes for leather where it is desired to keep the pigments in suspension as long as possible, ethanolamine soap is useful. Its properties as an emulsifier enable the pigment finishing to be more satisfactory than hitherto owing to the greater stability of the colors. Ethanolamine soap is devoid of all deleterious action on the leather grain or fibres and has itself well defined lubricating properties. It is worth mentioning that ethanolamine soap is now used in the manufacture of so called "emulsion paints." These contain linseed oil paint and water in the form of a fine dispersed emulsion rendered possible by the aid of ethanolamine soap. The pigments are ground in the oil in the usual way adding the necessary proportion of driers, etc. This mixture is then thoroughly mixed with a water solution of triethanolamine soap until the desired emulsion is formed.

A number of other important emulsions are formed by the aid of ethanolamine soaps. Mention may be made of disinfectant emulsions, perfume emulsions, horticultural emulsions, scouring emulsions and polishing emulsions. The application of ethanolamine soap to the manufacture of toilet preparations is of particular interest. It has been found that vanishing cream containing 1.5% of ethanolamine soap has a better consistency than one devoid of the product. The former is firmer and keeps better. In addition, creams containing the new detergent agent allow a greater percentage of water to be present than would otherwise be possible. The low alkalinity of ethanolamine soap renders it absolutely free from all irritating properties and thus fits it for general use in toilet preparations, especially creams and good quality soaps.

ETHANOLAMINE soap is at present finding an important use in the modern dry cleaning establishment. It is very soluble in naphtha and other common grease solvents and the presence of water does not result in any precipitation of objectionable fats. Garments cleaned with spirit containing ethanolamine soap do not possess a rancid and disagreeable smell which is usually the case with goods cleaned with many benzine soaps made by dissolving soap and free fatty acid in the solvent. Experts claim that the use of ethanolamine soap does away with a large

amount of spotting at a later stage of the operation. The reason for this is that the soap has a marked softening action on sugars and other gummy matters which contaminate clothes and enable these latter to be cleaned fairly easily. The amount of ethanolamine soap necessary for adequate dry cleaning is quite small and it is very simple to prepare the spirit solutions. There is no doubt that the introduction of this new compound into the dry cleaning establishment means that greater efficiency and simplicity of manufacture may be attained. A number of powerful grease solvents are now produced from special solvents and triethanolamine emulsions. They are likely to be very popular owing to their remarkable efficiency and cheapness.

The ethanolamine soaps are continually finding new and important industrial applications and they are now being looked upon in various quarters with a view to manufacturing altogether new products and for the improvement in the quality of many old ones.

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Whaling Notes

The summer months have shown little change in the whaling situation. The enforced laying up of the fleet has thrown out of work men who are usually employed in the expeditions. About two thousand men have been hired to man the English boats which have decided to continue operations. The announcement at the beginning of August by another English firm that its expeditions would go out again this year was met with surprise and deep concern in Norway. A request was forwarded to the English firm to desist and lay up as had the Norwegian firms, but the reply stated that preparations had gone too far to make any new decision. Norwegian companies held conferences as to what steps should be taken but after due consideration the first stand was confirmed. The Norwegian government decided on July 31, to waive taxes on any whale oil of the season of 1930-31 which is unsold and may be later sold at a price of under £20 per ton. (Tax amounts to 20 ϕre per barrel—1 kr.—20 ϕre—$.268). It is anticipated that the whaling companies can use this year to reorganize and improve their methods of carrying on whaling operations and to check up on costs and future developments.

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Many of the new specialties of M. Naef & Co., Geneva, Switzerland, are described for the first time in the new catalog of Ungerer & Co., New York. A new line of absolutes of Charabot & Co., Grasse, France, is also described. Ungerer & Co., are New York agents for Naef & Charabot.

Glycerine Imports Continue Small

Imports of crude glycerine into the United States during September, 1931, remained at a low figure, totaling only 800,011 pounds, valued at $39,286, as compared with another small monthly total of 748,893 pounds in August, worth $35,987. Imports of refined glycerine also remained small, totaling only 50,891 pounds worth $3,853, as compared with 38,720 pounds, worth $3,024, in August. The following figures give in pounds the imports of glycerine into the United States over a period of years:

	Refined	Crude
1923	585,792	14,548,660
1924	1,500,644	14,427,054
1925	2,043,606	19,264,654
1926	10,839,093	27,658,552
1927	8,288,574	14,943,670
1928	4,217,943	4,951,651
1929	5,381,684	14,951,901
1930	3,136,809	12,144,193
Jan.-Sept., 1931	868,412	7,780,304

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History of Chiris Establishments Told

The history and growth of the Antoine Chiris establishments throughout the world is told in an elaborate brochure recently published by the parent company in France. It was in 1768 that Antoine Chiris first commenced the production of perfumed oils, quintessences and soap tablets after a careful survey of the Grasse essence industry. The company was directed through the first century of its existence by its founder, and after his death by Anselme Chiris and Leopold Chiris. In 1868 under the direction of Leon and Edmond Chiris the factory of Place Nueve was transferred to a larger place and new resources and methods were utilized to extend the scope of the concern. George Chiris, son of Leon Chiris, founded the New York branch of the Chiris Establishments in 1896. He carried through a wide program of colonial production, establishing base points of supply in all parts of the world where aromatic materials are produced. The future course of the company will be in the hands of Leon Antoine Chiris, present representative of the name.

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According to a recent number of the *Economic Review of the Soviet Union* Russia's program for the production of soap and soap products for 1932 is set at one million tons. Among the materials to be used in the manufacture are 40,000 tons of naphtha, 90,000 tons of white resin, 30,000 tons of fat by-products, and 30,000 tons of fish and sea animal oils.

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SOLVAY Super Cleanser

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This ideal cleaner and cleanser for general cleaning is efficient, effective and entirely soluble in water. Super Cleanser contains no harmful ingredients nor inactive filler. It is *all active cleanser* Solvay Super Cleanser is good enough to beat competition and can be sold at a profitable price.

SOLVAY Snowflake Crystals

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Pure white, crystalline, immediately and entirely soluble, Solvay Snowflake Crystals is an excellent water softener and effective soap saver. Perfect solubility enables this mild cleanser to do its work without leaving a residue. Snowflake Crystals also makes the most perfect base for bath salts.

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Alkalies and Chemical Products Manufactured by The Solvay Process Company

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SOLVAY PRODUCTS

Say you saw it in SOAP!

Detergents and Water Softeners

The Part Which They Play in the Nation's Annual Bill of $700,000,000 to Laundries and Dry Cleaners

H. O. MORAW

Chemical Division, Dept. of Commerce

MORE than $700,000,000 is paid annually to commercial laundries, dyeing and cleaning establishments by the American public. Likewise there are numerous commercial enterprises such as cleaning of metals before finishing of metal products, exterior cleaning of large office and public buildings, and the dairy, canning, soft drink, soda fountain and brewery industries with their washing and equipment cleaning requisites. These industries all offer a market for cleansing materials at home and abroad, while water purification and clarification is an important related phase.

Soap and water, the most widely used cleaning chemicals are being supplemented every place with numerous other cleaning chemicals. The water in numerous places is a carrier of material which impairs its value as a cleansing or industrial processing agent. Consequently chemical and physical pretreatments of water supplies are extensively used. Moreover chemical cleaning operations without water are manifold.

The rapid growth of the world textile industry with the keener competition resulting from uniformly higher quality products the spread of dry-cleaning, dyeing and power laundry service as well as use of mechanical household washing machines, are all producing a cumulative effect in commercial trade circles. These newer developments are forcing keener study of the needs for and the effects of chemical cleaning agents and methods. Modern water systems, plumbing and bathing facilities have been developing hand in hand with water clarification and sterilization methods.

As the value of these various services penetrates the social and commercial structure of foreign countries, power laundries, dry-cleaning plants, textile processing mills, municipal water systems and the like are established. These frequently require importation of the supplies including chemicals for their maintenance such as chlorine, alum, bleaches, solvents, ammonia, caustic soda, caustic potash, a trade in which the U. S. shares.

Prominent among the United States exports of chemicals of which a large proportion is utilized for cleaning operations and water treatment are: some 30,000 tons of sodium silicate, 80,000 tons of borax 6,500 tons of sal soda, 35,000 tons of soda ash, 60,000 tons of caustic soda, 25,000 tons of aluminum sulphate, 2,500 tons of bleaching powder, 1,600 tons of water softeners and boiler compounds, 5,900 tons of scouring powders, and pastes, 20,000 tons of laundry soaps and 57,000 pounds of bath salts.

Details of the exports of each of these products cannot be supplied here, but it is of interest to note the chief buyers of two of the groups in 1929. In the water softeners group, for example, the largest sales were made to Argentina $275,458, Chile $26,173, Canada $18,838, Mexico $10,831, Peru $7,163, Spain $5,825, Uruguay $5,698, Cuba $4,059. The principal buyers of scouring soaps and powders included Canada $145,595, Australia $69,563, Cuba $80,177, Union of South Africa $28,741, Chile $27,449, Mexico $28,774, Sweden $24,717, New Zealand $24,809 Argentine $21,920, Brazil $20,695. Sales of varying lesser amounts were made to 70 other countries.

ACCORDING to the manager of the National Association of Dyers and Cleaners, the school for training craftsmen in the art of cleaning recently experienced difficulty in supplying sufficient skilled workers because of the heavy demands by the industry. This was attributed to increased demand for cleaning service due to lower prices and recognition by the unemployed of the desirability of keeping up appearances in applying for jobs.

The above organization estimated that there were about 7,000 dry-cleaning plants operating in the United States employing 100,000 workers, although a smaller number of both are shown in the accompanying table of the Bureau of Census figures on cleaning plants, the difference being due probably to the inclusion of cleaning units

operated by power laundries. The following table shows the official figures for these lines of direct consumer service as well as the total production of the related soap industry.

1929 Census of Commercial Power Laundries, Dyeing and Cleaning Plants. (Establishments operated by Mechanical Power, reporting receipts of $5,000 or more.)

	Dyeing and cleaning	Laundries	Dyeing and finishing textiles
Number of establishments	5,296	6,216	656
Wage earners	59,283	220,706	69,643
Wages	$75,832,734	$214,999,515	$83,738,948
Cost of supplies, fuel, electric power	$26,858,912	$75,552,579	$217,593,429
Value of service or total products	$201,255,460	$509,854,373	$408,702,685

IN general, the diversity of chemical products used for cleaning is about as varied as the cleaning problems. In the absence of data showing the extent of the trade in all the different chemicals used, only a few of the more prominent products used for cleaning and the chemical raw materials from which they are made are discussed here. Details may be procured from the Bureau of Standards Circular No. 383, "Washing, Cleaning and Polishing Materials," whose author, F. W. Smither, extended a cooperative review of this paper.

The dry cleaning soaps also known as "benzine soaps," which dissolve in cleaners' solvents are usually made from oleic acid and caustic potash or soda, or a mixture of the two. Ammonia is frequently used in making dry cleaning soaps. Triethanolamine is a recently developed American product, capable of forming soaps soluble both in water and in dry cleaning solvents, and of emulsifying mineral oils. These properties and its suitability as a reagent for various industrial purposes give it a rather wide potential market. In addition to these chemicals the hydrogen and oxygen gases liberated in the electrolytic cleaning of metals aid in the mechanical removal of dirt.

Sodium silicate is used to sustain the detergent action or properties of soap solutions; alkaline solutions and resin soaps to promote free rinsing; alkaline cleaners with soap solutions to provide a colloidal action. Soap free alkaline cleaners containing finely divided material such as silica and alumina may exert a scouring action or imitate the colloidal action of the soap. Coming within the latter category should be included products called colloidal cleaning powders, which are composed of causticized starch or cellulose matter or certain colloidal clays mixed with such substances as soda ash, trisodium phosphate, washing soda, borax, and soap. Certain silicates of soda and sodium aluminum silicate may be used alone as colloidal cleaners.

Much progress has been made by scientific, commercial and government research institutions in developing dry cleaning solvents. In addition to the well-known cleaners' naphtha, one of the most recent developments was a special petroleum distillate for a dry cleaning solvent which reduces the fire hazard and at the same time is a solvent free from the ingredients which formerly were responsible for the objectionable odors remaining in garments after being dry cleaned. Approximately 30,000,000 gallons of this solvent, known as "Stoddard Solvent" are used annually by the dry cleaning industry, of which a substantial part is recovered and re-used. Recent developments of dry cleaning equipment for home and industrial purposes, designed for use with these low fire-hazard solvents such as the above and carbon tetrachloride and trichloroethylene and the like, promise greater economies for commercial dry cleaning and expansion of consumer use of this important service.

The economic advantages of recovering solvents both in the dry-cleaning and chemical industries have increased the outlets for precipitating agents; and for absorbent materials such as powdered activated charcoal, silica-gel, silica, and diatomaceous earth in addition to filtering materials for removal of odors, colors, etc., not removed by distillation.

THE laundry chemicals used are bleaching agents—chlorine, chlorinated lime and soda, peroxide, perborates, permanganate, ozone, sodium bisulphite and oxalic acid; sours include: —acetic acid, sodium bisulphite, oxalic acid, sodum bifluoride, and sodium silico-fluoride. Sodium bicarbonate and calcium chloride are used in rinsing clothes to obviate damage from residual chemical sours or "winter damage" from fumes in the atmosphere. In addition to these, there are bluings including indigo, soluble Prussian blue, ultramarine and blue aniline dyes, with an annual production value exceeding $1,000,000.

Distinct from the garment dyeing and cleaning industry is the dyeing and finishing textile industry reporting separately to the Bureau of Census as a group which consumed in 1929 over $217,000,000 of materials chiefly chemicals, soaps, and dyestuffs. This figure is exclusive of those textile mills which perform their own dyeing and finishing and do not report them separately.

HARD water containing dissolved mineral salts naturally causes great private and industrial inconvenience, soap losses, and fuel waste. With waters in some regions, one-half to two-thirds of the soap used is wasted, because it is over and above the quantity required to do the cleaning itself, and should largely be saved by chemical pretreatment. Information on the condition of water for industrial use is available from the United States Geological Survey, Wash-

ington, D. C. Much of the expense and inconvenience of cleaning clogged drain pipes may be eliminated by use of drain cleaners which may contain soda alkali and aluminum turnings, niter cake, etc.

Unofficial estimates place the quantity of aluminum sulphate used annually for water treatment at 200,000 tons, and soda ash in excess of 100,000 tons. Some of the other principal water treatment chemicals are lime-barium carbonate, sodium and barium aluminates, sodium aluminum silicate (zeolite), ferric alumina, sulphur dioxide, ammonia, copper sulphate, chlorine and salt. Although consumption figures are not available, considerable quantities of these products are used for household and industrial water softening in small automatic equipment as might be deduced from the sales of the latter which are shown in the accompanying table.

UNNECESSARY waste of fuel may result from deposits in boilers of lime and magnesium compounds which occur in hard waters. Investigations by the Bureau of Mines showed losses of efficiency due to boiler scale varying from one-fiftieth to one-ninth of an inch in thickness, range from 9 to 16 per cent. Estimates from this study showed that probably 15,000,000 tons or more or coal annually could be saved by elimination of hard water for locomotive boilers alone. For example one of the large railroads of the country utilizing soft water was reported to be saving at least $75,000 annually; a steel company with an annual output of 50,000 tons, reported the saving of 200 pounds of coal per ton of steel. While according to The American Railway Engineering Association, an unofficial source, every pound of scale kept out of boilers saves the railroad company about 13 cents, the equivalent of a substantial sum annually. In addition to the removal of scale forming solids, it is of the greatest importance to railroads to remove corroding ingredients in water, especially oxygen. One authority indicated that it costs approximately $2,000 to replace a set of boiler tubes in a modern locomotive and some waters are so corrosive under the high temperatures and pressures prevailing in locomotive boilers that new tubes would be required in six months without chemical treatment.

BOILER and pipe deterioration due to dissolved oxygen, carbon dioxide, common salt, magnesium chloride in the water supplies are prevented or reduced by various means; i.e., gases are removed by chemical reagents (deactivation), or deaeration, a physical means; protective films may be formed inside pipes by use of sodium silicate; alkalies are used to counteract acid.

Few industries have so quickly and widely recognized the necessity of good water as the textile industry. The leaders in this industry have long practiced the removal from their water supplies of coloring matter, suspended solids, dissolved minerals and employ various chemicals appropriate for absorbents, sedimentation, softening and the like with the necessary chemical engineering supervision. Moreover, this industry is actively investigating the cleansing and related applications of chemicals and allied materials for scouring, degumming, boiling off, bleaching and dyeing.

Iron chloride and sodium chlorate are assuming new industrial importance in sewage filtration and clarification. Compressed air and chemical cleaners in use are now a common sight in cleaning building exteriors. The metal cleaning and electroplating industries are very important users of chemical cleaners, including mineral acids, petroleum solvents and chlorinated hydrocarbon solvents, emulsifiers or wetting agents such as sodium metasilicate and trisodium phosphate, foaming agents, scum promoters such as ricinoleic acid, casein, etc., and acid-alkali balancers including caustic soda, soda ash, silicate and phosphate of soda, borax, etc.

United States Production of Cleansers, etc.

	Boiler Compounds Value	Cleaning Preparations Value	Soap Powders Value	Household Ammonia Value
1921	$3,622,352	.....	.....	.....
1923	4,889,270	$20,119,354	.....	.....
1925	5,756,729	24,876,649	$24,858,113	$1,848,198
1927	5,867,285	32,262,813	26,909,511	1,249,117
1929	4,904,866	43,625,055	25,622,421	981,551

United States Sales of Domestic Water Softening Apparatus.

	Number Units	Net Sale Price	Aver. Value Per Unit
1928	16,189	$1,903,587	$117.69
1929	15,963	1,848,396	115.79
1930	11,783	1,495,247	126.90
1931 (6 mos.)	4,457	529,497	118.80

IN 1929, laundry soap production totaled about $82,000,000 while sales of soap to power laundries, hotels, textile mills, etc., totaled $23,684,000. According to those in the trade, steam laundries are the leaders in the use of soaps containing water-softening builders. Moreover the soap industry recognizing the importance of effectiveness for its products has enjoyed a gratifying increase in sales of the group of quick dissolving granulated and powdered soaps as reflected in the increase from 107,000 tons in 1927 to 168,000 tons in 1929. The latter was valued at nearly $36,000,000 while another $23,000,000 worth of cleansing, scouring and soap powders sold in 1929 includes products containing appropriate chemical softeners. Another group of products used largely by households is "Cleaning Preparations" produced by some 429 establishments in 1929 to the extent of over $43,000,000.

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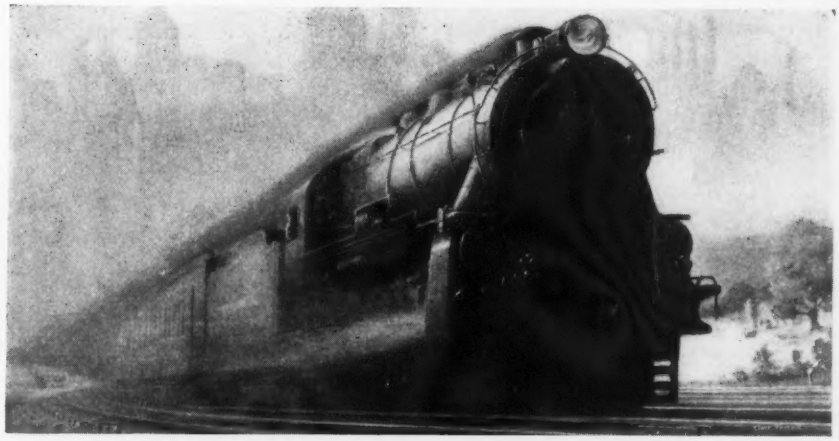
"It's Better Packed in Tin"

DETERGENTS for RAILROAD CARS

How the Pennsylvania Railroad Keeps the Exterior of Its Cars in Passenger Service in Presentable Appearance



Particularly among the "crack" trains of the country, it is imperative that they look their best at all times. From a painting of the Pennsylvania's famous Broadway Limited.

A PLEASING appearance of the rolling equipment of a railroad is an asset. Keeping its passenger cars clean has always been an important phase of railroading, and has presented a problem requiring much attention. The dirt which accumulates on a car consists of mineral matter or carbon from the coal smoke, particles of coal from the smoke stack, and cinders which have impinged against the varnish with such force as to imbed themselves, together with dust from many sources. In addition, the particles of dirt are laden with oil which forms a grimy, pigmented film in intimate contact with the paint and varnish and which clings tenaciously.

Obviously, the ideal cleaner is one which would dissolve the film of dirt and leave the varnish untouched. Unfortunately, no such solvent is known, and we must depend largely on detergents to loosen the accumulation of dirt and mechanically carry it away. Much time and study have been spent in trying to find some detergent or some method of car cleaning which would not be injurious to the paint and varnish. The varnishing of a car is expensive, and it is a serious matter to have the varnish destroyed during the cleaning operation.

It seems hardly necessary to mention that both paint and varnish are readily dissolved by caustic alkali, including carbonated alkali and other strongly alkaline salts, but from the many proprietary products offered for the cleaning of painted and varnished surfaces it would seem that this important though elemental fact is frequently overlooked. It is probably only fair, however, to mention in this connection that it is possible to use a detergent containing a considerable excess of alkalies in such manner that no serious detriment to the paint and varnish will result. Chemical action takes place under many circumstances in proportion to the length of time the reacting substances are in contact. If, then, a detergent containing ingredients which under ordinary circumstances are considered harmful, is left in contact with the surface to be cleaned for only a short time, the detergent action desired may be obtained without the deleterious action on the paint and varnish. However, it is

impossible to get such intelligent use of dangerous materials as will not result in great loss and damage to the surfaces cleaned. Therefore, the use of detergents containing caustic alkali or carbonated alkali even in moderate excess is prohibited on both the exterior and interior of passenger cars.

Many of the liquid preparations submitted for cleaning cars have contained mineral acids. These are considered dangerous materials to use, for in addition to having a deleterious action on the paint and varnish, they may accidentally come in contact with unprotected metal parts which will be either partially dissolved or seriously corroded by chemical action. Of the acid cleaners, those containing a comparatively weakly dissociated organic acid, such as oxalic acid, are considered the least detrimental of the more energetic cleaners. In fact, a preparation containing oxalic acid as the active ingredient has been used by the car cleaning department for a number of years. However, it is not to be inferred that this cleaner does not have any injurious action on the surfaces being cleaned. Probably each time that a car is cleaned with such a preparation a small portion of the varnish film is removed. But in lieu of something better yet to be discovered, this acid preparation is used in obstinate cases.

FROM the foregoing it will be noted that car cleaners are restricted to preparations which are free from excess alkalies, carbonate of soda or alkaline salts, and also free from mineral acids. The cleaning of the interior of cars used in the passenger service is done exclusively with soap and water. The soap used is a neutral vegetable oil soap. The exterior of passenger cars may likewise be scrubbed with a solution made from a neutral vegetable oil soap in water, and thoroughly rinsed with clear water. This method is frequently used on cars which have been in service for thirty days or less since the previous cleaning.

The exterior of the car may be cleaned with a neutral preparation consisting mainly of an emulsion of mineral oil, water, soap and abrasive material. This preparation is applied to the surface to be cleaned and thoroughly scrubbed with brushes, after which the car is wiped down with waste. This process is known as "modocing" which is a familiar term in any railroad car-cleaning department. No water is used in the process and the varnish after being rubbed down will have a polish due to the oil in the preparation. It is not desirable to have a heavy film of oil on the car as particles of dust will adhere to it. Therefore, the nature of the oil used in such a preparation demands considerable attention. This method of cleaning is applicable to cars which have not been in service more than thirty days since the previous cleaning.

The exteriors of cars which have been in service sixty days or more since a previous cleaning usually require a more active cleaner than the two previously mentioned. In such cases, an oxalic acid preparation is usually employed. The cleaner is applied with brushes until the entire car is coated with the material. The car is then scrubbed with brushes and thoroughly rinsed with clear water. After cleaning in this manner the varnish will be lacking in lustre but if desired this may be restored by rubbing down with a good polishing oil.

The cleaning methods outlined are only those in use at what is known as "extraordinary" cleaning periods. No mention has been made of the frequent intermediate cleaning which may consist of dry wiping or rinsing with clear water. A car cleaning program must of necessity take into consideration many things and will vary somewhat with the seasons of the year. During the summer months when traffic is heavy and more power is required in hauling long and heavy trains, the exteriors of the cars require cleaning more frequently.

In the final analysis, car cleaning preparations must be of such a nature that a car may be cleaned with them not only once but many times, and each time restoring it to somewhat near its original appearance. It must further be of such a nature that it can be used by anyone with ordinary intelligence, and with the assurance that the paint and varnish will not be seriously impaired.

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Large supplies of cocoanut and palm oils and low cost of labor make feasible the manufacture of soap in Java. The necessity of bathing several times a day in that country accounts for an appreciable consumption of this product. Purchases of the majority of natives are confined to native oils and low-priced brands. However, there are several thousand native families of the merchant class demanding the higher grade of imported articles. Highly scented products are favored. Sales of American toilet soap in Java normally exceed $50,000 annually.

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Announcement has been made by Metal Package Corporation, of the acquisition of a can-making plant located at 1845 to 1903 West 74th St., Chicago. The additional facilities which this plant affords, will enable the new management to better serve the can consuming industries in Chicago and adjacent territory. Wm. J. McCarthy, who has long been identified with the can industry, will be in charge of sales.

SECURITY PRICES

PRICES of stocks of soap, chemical, insecticide, and allied companies as quoted on the New York Stock Exchange, Curb Exchange, other exchanges and over-the-counter are given in the following table. This table of prices is compiled monthly for *Soap* by a representative of one of the oldest and best-known brokerage houses in New York.

	High 1931	Low 1931	Nov. 2 1931	Dec. 1 1931
Allied Chem.	182¾	68	85	76⅜
Am. Agric. of Del.	29¾	5⅛	8½	6¾
Amer. Cyan. "B".	12¾	3⅝	5	4⅛
Armour of Ill. "A"	4½	1	1½	1⅛
Bon Ami "A"....	66¼	49	50	57
Brillo	8½	5⅛	8	8
Colgate, P. P.....	50½	28	33½	29⅝
Corn Prod.	86⅝	36¼	48⅜	48
Coty	18	3¾	4¾	4
Dow Chem.	51½	30	35	36
Drug, Inc.	78¾	42¾	56	54½
Du Pont	107	53¾	58¾	56½
Glidden	16⅛	4½	8	6⅜
Gold Dust	42⅛	18	21⅜	19¼
Gulf Oil	76	38	52	45⅛
Heyden	13	7¼	7¾	7¼
Int. Agric.	5¼	1⅛	1½	1⅜
Lehn & Fink	34¾	18½	23	20¼
Mathieson	31½	14¾	19	16½
McKess. & Rob...	17	5½	7¼	6½
Monsanto	28¾	16¼	25¼	22½
Newport "A" ...	55	41	55⅛	55
Proc. & Gamb...	71¼	39⅝	47	44
Shell Union	10¼	3¼	4¾	4⅛
Sher. Will	68½	40	46	40
Sinclair	15⅞	5½	7½	6½
S. O. of Cal.	51¾	28⅛	34⅝	30½
S. O. of Ind.	38½	15⅞	22¼	19⅛
S. O. of N. J. ...	52½	28¼	34⅞	32⅝
S. O. of Ohio ...	62½	35	40	36
Swift & Co.	30⅜	20¾	22¾	22¼
Union Carb.	72	27½	35¾	34
Westvaco	40	8¼	12¾	10¼
Wilson & Co. ...	4	⅝	1	1¼

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F. J. Stokes Machine Co., Philadelphia, manufacturer of drying equipment, evaporators, stills, mixers, vacuum pumps, etc., has issued a new booklet describing the complete line of equipment which it produces.

—o—

Dental creams to the value of $230,513 were exported from United States during September, 1931.

Deny Rehearing for "Oxol"

Refusing to re-hear the J. L. Prescott Company of Philadelphia, Pa., on its petition for registration of the trade mark "Oxol" for a liquid germicide, the United States Court of Customs and Patent Appeals this week made final its order sustaining the protest of Procter & Gamble Co., makers and distributors of "Oxydol." Unless appeal is taken to the Supreme Court of the United States, this ruling will conclude litigation which has been going on since December 27, 1928, when the Procter & Gamble Co. formally protested registration of "Oxol" on the ground that it would cause confusion in the trade with the previously registered mark "Oxydol."

Answer was made that the names are not similar in appearance or sound, one having two syllables and the other three, and that the goods to be marked are not of the same classification, one being a soap powder, the other a germicide in liquid form. These claims were sustained by the examiner of interferences and his decision was affirmed by M. J. Moore, assistant commissioner to whom appeal was taken in the United States Patent Office. When the matter reached the appeals court, the Procter & Gamble protest was successful, whereupon application was made for re-hearing and denied.

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The New York State Public Service Commission has authorized for the New York Central Lines (East) reduced carload freight rates on silicate of soda, minimum weight 40,000 pounds dry, 36,000 pounds other than dry, applicable also to shipments in tankcars subject to rule 35. The new rates apply to shipments from Gardenville to stations on the Fonda, Johnstown & Gloversville, the rate to Johnstown being 22 cents per hundredweight; that to Gloversville, 23 cents. These rates will become effective October 25.

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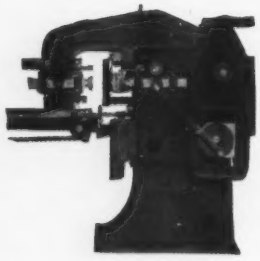
Beauty and barber supply dealers have accepted trade practice rules for their industry following several changes suggested by the Federal Trade Commission. The conferences at which the rules were drawn up were held in Chicago, December, 1928, and in New York, March, 1929. The Commission approved the general list of rules following some rewording, but declined to accept two rules pertaining to jobbers.

—o—

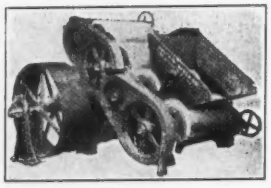
L. J. Zollinger has resigned his position as vice-president in charge of sales for George Silver Import Co., New York, and will become associated with Albert Verley, Inc., Chicago, as vice-president and director in charge of the New York office.

SOAP MACHINERY

Special Offerings



4 JONES AUTOMATIC combination laundry and toilet soap presses. All complete and in perfect condition.



H-A SOAP MILL

This 4-roll granite toilet soap mill is in A-1 shape. Latest and largest size rolls.

DOPP CRUTCHERS

Sizes from 300 pounds to 3,000 pounds. All in best condition and guaranteed.

Quality Used Machinery

You can see NEWMAN equipment in actual operation at our Chicago warehouse.

DRYERS — Two Proctor & Schwartz Large Roll Soap Chip Dryers Complete.
Three Proctor & Schwartz Soap Chip Dryers with five Chilling Rolls. Devine Double Drum Vacuum Dryer.
Proctor & Schwartz Bar Soap Dryers.
Condon & Huber Soap Chip Dryers.

SOAP CRUTCHERS — Houchin-Aiken, Dopp & Doll Steam Jacketed Crutchers, 1000 lb., 1200 lb., 1350 lb., 1500 lb., 1800 lb., 3000 lb., 6000 lb. and 10,000 lb.

SOAP PRESSES—Jones, Machinery Designing, & Ralston Automatic Presses for toilet and laundry soap. Dopp, Crosby & Empire Foot Presses.
Scouring Soap Presses.

GRINDERS & MIXERS — Day Jacketed Marshmallow Mixers, Pony Mixers, Talcum Powder Mixers, Rouge Mixers, Ointment Mill, etc. Schultz O'Neill Mills.

SOAP CUTTING TABLES—Houchin-Aiken Steel Automatic Table with self-spreader and extra headers.
Wooden Tables with and without self-spreader attachments.

SOAP SLABBERS—Houchin-Aiken, Curtis-Davis, Dopp & Newman's Hand and Power Slabbers.

TOILET SOAP MILLS—2, 3, 4, 5 and 6-roll Granite Soap Mills.
Houchin-Aiken 4 and 5-roll Steel Mills.
Buhler 3, 4, 5-roll Steel Mills.

PLODDERS — Houchin-Aiken, Rutschman & Allbright-Nell 6", 8" and 10" Plodders.

SOAP POWDER MACHINERY —Blanchard No. 10-A and No. 14 Soap Powder Mills.
Broughton Soap Powder Mixers.
Wms. Patent Crusher & Pulverizer.
Sedberry Crusher, Grinder & Pulverizer.
A-N 5x7 Crystallizing Rolls.

FILTER PRESSES—Sperry, Perrin & Shriver Cast Iron Filter Presses 12", 18", 24", 30" and 36". International and Monopod Filters.

VARIOUS OTHER ITEMS—Wm. Garrigue Glycerine Evaporators.
Steel Soap Frames, 600 lb., 1000 lb., 1200 lb., 1500 lb., and 1800 lb. cap.
Automatic Soap Wrapping Machines.
Steel, Copper and Aluminum Kettles.
Soap Remelters, Tube Fillers.
Filling and Weighing Machines.
Pneumatic Scale Corp. Can Filling Machine for cleansers, etc.
Brass Soap Dies for foot and aut. Presses.
Soap Chippers, Scales, Motors, Amalgamators.
Soap Racks, Bottle Filling and Capping Machines. Talcum Can Crimpers, etc.

Send us a list of your surplus equipment—We buy single items or complete plants.

Also makers of a new line of soap machinery. Get our complete list and prices on this new equipment! All used machinery is sold as absolutely guaranteed in first class working condition. Everything listed here is ready for immediate shipment.

NEWMAN TALLOW & SOAP MACHINERY CO.

1051 WEST 35TH STREET
CHICAGO, ILL.

Our Forty Years of Soap Experience can help solve your Soap Problems

Say you saw it in SOAP!

Colombia Increases Tariff

The Republic of Colombia issued a new tariff schedule effective October 1 last making sharp increases in rates of duty on essential oils and chemical products. This makes the second wide advance since May. The duty on medicinal essential oils which prior to last June 1 was 25c per kilo, and since then, $6.50 per kilo, has been jumped up to $19.50 per kilo. The duty on perfume oils which was $5.00 prior to June 1 is now also $19.50. Citronella is an exception, taking only 70c per kilo duty. Chemical duties have been advanced generally 100%. There has been no change in the duties on disinfectants and insecticides of 1c per kilo. Against perfuming compounds for soaps and toilet goods, an import embargo has been set. It is also forbidden to import toilet goods in finished form such as creams, lotions, tooth pastes, etc. Soap is not mentioned, and apparently is excepted. The new rates act as a practical embargo on all essential oils as their import cost is prohibitive.

—o—

Issue Sodium Metasilicate Pamphlet

Philadelphia Quartz Co., Philadelphia, has issued a pamphlet giving a complete review of the uses of sodium metasilicate, the new alkali which is now attracting considerable attention among users of cleaners. It is said of this new product that it "provides strongly alkaline solutions which remain effectively alkaline until they are almost completely spent or neutralized. A bath of high cleansing efficiency is easily maintained above pH 12 with Sodium Metasilicate alone. Metso provides a useful combination of active alkali buffered to keep corrosive effect at a minimum." Sodium metasilicate is recommended for use in cleaning dairy equipment, in bottle washing, metal cleaning, textile scouring, hide cleaning, general household cleaning and cleaning of rags in the paper industry.

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The domestic soap industry of Nicaragua has undergone expansion during the past year as is indicated by the increase in the imports of soap raw materials from 392 metric tons in the third quarter of 1930 to 451 tons in the same quarter of this year.

—o—

A number of applications for investigation of foreign and domestic costs of producing ground pumice stone and pumice stone wholly or partly manufactured have been dismissed by the U. S. Tariff Commission.

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Exports of soda ash from United States during September, 1931, amounted to 3,746,220 pounds, worth $56,784.

No Cuban Duty Increase on Soap Oils

Coconut oil, palm nut oil, linseed oil and any substitute for linseed oil imported unrefined into Cuba to be used in the manufacture of soap and paint, have been exempted from the increases in duty on vegetable oils made effective by the Cuban government Nov. 11, according to the Department of Commerce. The decree increases duties on vegetable oils to stimulate the production of domestic oleaginous seeds.

The rate on coconut oil is $0.80 per 100 gross kilos; peanut, sesame, and palm nut oil, $3.20 per 100 gross kilos; unrefined linseed oil and "orajo," $0.40 per 100 gross kilos, and other inedible vegetable oils, not specifically mentioned, $4 per 100 gross kilos. To these rates must be added the general surtax of 3 per cent duty.

To gain the benefit of present import rates, manufacturers of the oils mentioned must accompany their shipments with sworn declarations already in use in analogous cases. The present rates will apply only when the oils are imported by manufacturers.

—o—

Imports of castile soap into United States during September, 1931, totaled 249,661 pounds, worth $24,940, as against 254,987 pounds, valued at $20,092, during the corresponding month of 1930. Imports of toilet soap in September, 1931, totaled 93,214 pounds, worth $30,584, as against 207,588 pounds, valued at $65,902, during the same month of last year.

—o—

A twenty per cent tax on cosmetics and perfumes in New York State is under consideration by the Mastick Commission which was created by the State legislature to work out a new system of taxation. It was expected that a ten per cent tax might be advocated, but the twenty per cent proposal came as something of a shock to the New York cosmetic and perfume trades.

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Toilet and fancy soap amounting to 545,943 pounds, worth $91,103, was exported from United States during September, 1931, as against 332,111 pounds, valued at $81,889, during the same month of 1930. Exports of laundry soap during September, 1931, totaled 1,780,191 pounds, worth $101,539, as against 3,169,841 pounds, valued at $216,048, during September, 1930.

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Exports of laundry soap from United States during June, 1931, amounted to 2,748,959 pounds, worth $172,525, as against 3,671,558 pounds, valued at $238,798, during the same month of 1930.

CHICAGO NEWS

THE Annual Banquet of the Chicago Perfumery, Soap and Extract Association was held Wednesday evening, December 2nd, at the Knickerbocker Hotel. In the number of guests alone, the party excelled all those held during the past five years. A crowd of three hundred and twenty-eight assembled in the grand ballroom and by eight-thirty the most diligent search would have failed to reveal a single discontented soul. A nine piece orchestra and six entertainment numbers drew much applause. As usual, too, the affair had imposed a strain on the ingenuity and ability of the entertainment committee, but the manifold details of management were accomplished efficiently and smoothly under the general direction of Chairman Arnold G. Schneider, of Victor Chemical Works. Assisting Mr. Schneider on the committee were J. De Lorme, of Riviera Products Co., Joseph Gauer, of Fritzsche Brothers, Inc., D. A. Day, of Heine & Co., and D. M. Clark, of Franco-American Hygienic Co.

The largest table parties were organized by the following: Franco-American Hygienic Co., Marshall Field & Co., Geo. Silver Import Co., C. A. Seguin Co., Victor Chemical Works, Walter H. Jelly & Co., Owens-Illinois Glass Co., and Solo Laboratories. The other reservations of tables of ten or less, were for Mallinckrodt Chemical Works, Monsanto Chemical Works, Givaudan-Delawanna, Inc., R. H. Lingott, Harry Hitzman, Riviera Products Co., Armstrong Cork Co., A. M. Burgh, Publicker Commercial Alcohol Co., Frank Z. Woods, E. M. Rowell & Co., Orbis Products Trading Co., Paul Pettit, Helfrich Laboratories, Merck & Co., Albert Verley, Inc., Norda Incorporated, Dodge & Olcott Co., Van Ameringen-Haebler Co., Inc., and Rossville Commercial Alcohol Co.

The well filled bags, distributed at the close of the banquet, carried on to the pleasure of the feminine guests, the established tradition of variety and value in the souvenir offerings. Each bag contained some thirty articles of toilet accessories of well known merit, most of them in the same packages in which they are distributed for retail sale. The donors of these articles were: American Can Co.; American Commercial Alcohol Co.; Armour & Co.; La Pompadour, Inc.; Acme Compact & Puff Co.; Carr Lowery Glass Co.; Swindell Brothers; The Western Co.; Marshall Field & Co.; Princess Pat; F. E. Barr, Fitch & Co.; Hazel Atlas Glass Co.; Solo Laboratories; Helfrich Laboratories; Clean Home Products Co.; Western Laboratories; Owens-Illinois Glass Co.; Marrow Manufacturing Co.; Walgreen Co.; Comfort Manufacturing Co.; Procter & Gamble Co.; Hewitt Brothers Soap Co.; Dr. Scholle; R. H. Lingott; and Wertham Bag Co.

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The annual election of officers of the Chicago Perfumery, Soap and Extract Association will be held on Wednesday, December 16th, at the Midland Club, which is the date of the annual business meeting. The nominating committee has named the following members to comprise the regular ticket: for President, Donald M. Clark, of Franco-American Hygienic Co.; for Vice President, L. A. Solo, of Solo Laboratories; for Secretary-Treasurer, William H. Schutte, of P. R. Dreyer, Inc. No opposition ticket has yet been received. Chairman Ray Morris, of the Bowling Committee, has announced that the annual Bowling Tournament will be held at the Elks' Club on the evening of December 23rd. It will be a handicap affair and turkeys will be offered as prizes as well as geese and ducks and perhaps several other kinds of birds. If they are brought to the tournament alive, the booby prize winner will be accorded the office of chief executioner.

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Within a very short time Victor Chemical Works will move its offices to new and handsome quarters occupying the entire thirtieth floor of the Board of Trade Building, at Jackson Street and La Salle.

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Final preparations have been completed, under the direction of William O'Neill and W. A. Kochs, Chairmen, for the Annual Stag Banquet of the Chicago Drug and Chemical Association. It will be held, as previously announced, at the Stevens Hotel on Thursday, December 17th.

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G. L. Acker, Des Moines, Iowa, salesman for the Los Angeles Soap Company, topped the division in a recent sales contest and gets a trip to the City of Angels as a prize. He will be accompanied by J. E. Oberreuter, Omaha, Nebr., district manager. Mr. Acker will be gone three weeks.

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Pioneers in Toilet Soap

(*From Page* 25)

industry established by the originator of this house.

Unlike many other kinds of business, the soap trade is the best in the warmest of weather. It is ascertained for a fact that where some grocery dealers sell twenty-five boxes of soap in July, they sell but five in January. Where to find a good quality of the article and further information as to how it is manufactured is shown in the series of drawings on another page."

George A. Williams Dies in Accident

George A. Williams, founder and president of Williams Sealing Corp., Decatur, Ill., died Nov. 11 from a heart attack caused when he fell from his motor boat, "Kork-N-Seal," into Lake Decatur. Mr. Williams, accompanied by a friend, was preparing to put the boat up for the winter, when he slipped from the narrow deck ledge into the water. He had succeeded in getting his coat off and was unbuttoning his vest, with assistance at hand, when his head slumped into the water. Mr. Williams was still alive when taken on board, but death occurred before they could get to shore. A lungmotor failed to revive him. The funeral was held Nov. 14 from the Williams home in Decatur.

George A. Williams

George Williams was widely known in the insecticide, disinfectant and allied fields as the inventor and manufacturer of the "Kork-N-Seal" cap for bottles and cans. The cap was perfected in 1905, but was not made commercially until 1909 when a factory was established at Waterbury, Conn. In 1914, the plant was moved to Decatur, Ill., this location having been chosen after Mr. Williams had investigated many cities in various parts of the country. In Decatur, the company has had its greatest growth. The present plant is a model—a four story steel, brick and concrete structure in a park-like setting. Plants have also been established in London, Paris, Copenhagen and Sydney, Australia, the latter having been put in operation only last year. Mr. Williams never stopped working to improve his product. Shortly before his death he announced that experiments designed to eliminate the sharp points on the cap lever had been successfully completed.

His many outside interests included those of director of the Decatur Association of Commerce, Illinois Manufacturers Association and the Illinois Chamber of Commerce, vice president of the Manufacturers Association, chairman of the State Senate Waterways Committee, president of the Decatur Club and president of the Springfield Diocese Episcopal Church Club. He is survived by Mrs. Williams, their children and O. L. Williams, his nephew, who has been his active associate in directing the affairs of the company. There will be no change in the management of the Williams Sealing Corp. The business will be continued by the organization which Mr. Williams built.

Urges Curtailment of Whaling

International agreements to control whaling and whale oil producing industries are suggested in the annual report of the Bureau of Fisheries which has been submitted to Secretary Robert P. Lamont of the Department of Commerce. The report, written by Henry O'Malley, Commissioner in charge of the Bureau, calls attention to the fact that production of whale oil more than quadrupled in the 10 years period between 1920 and 1930, and makes the following observation:

"This intensified pursuit of whales in practically all seas of the globe has aroused grave concern lest the supply be exhausted and the investment in the industry, which has yielded over $60,000,000 in products in a year be jeopardized. Because of the cosmopolitan character of whales and the number of countries engaged in the fishery, regulation would appear necessary by international agreements."

Data compiled by the Bureau indicate that although the United States no longer dominates the field as was the case some years ago, annual production still exceeds one and one-half million gallons and imports run over seven million gallons of whale oil. The introduction of factory ships, some with displacement as great as 30,000 tons with storage space for as much as 6,000,000 gallons of oil, has intensified the industry. Between 1920 and 1930 the world production advanced from 20,400,000 gallons to 93,400,000 gallons, largely by reason of the facilities made available through these factory ships. Among the protective measures suggested are prevention of the capture of certain of the rarer species, prohibiting the killing of immature whales of whatever species, and stopping unnecessary exploitation of the industry.

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Opportunities for Export

The following opportunities for export of American soaps and allied products have come to the Bureau of Foreign and Domestic Commerce, Washington, D. C. American manufacturers can secure the full details of the inquiries by communicating with the Bureau, care of the Department of Commerce. Be sure to mention the number of Foreign Trade Opportunity in writing.

			Agency or purchase
54,645	Toilet preparations	Guatemala	Agency
54,694	Household detergents	Czecho-slovakia	Agency
54,729	Cleansing and degreasing preparations	Japan	Purchase
54,787	Toothpaste	Netherlands	Purchase
54,790	Pyrethrum and other plant insecticides	Germany	Agency
55,018	Disinfectant raw materials	Venezuela	Purchase
55,019	Household cleaners	Canada	Agency

When it comes

to supplying the soapmaker

with perfume materials, we are in position to furnish the highest quality merchandise at interesting prices.

When Again in the Market for

Oil Rosemary Spanish
Oil Thyme Red and White
Oil Lavender Flowers French
Oil Vetivert Bourbon and Java
Oil Geranium Bourbon and African

Write Us for Prices.

All Products of

Bertrand Freres, S. A.

GRASSE FRANCE

Sole Representative U. S. and Canada

P. R. DREYER INC.

26 CLIFF STREET NEW YORK

Agent for

PAOLO VILARDI	H. RAAB & CO.	VANILLIN FABRIK
Reggio Calabria, Italy	Roermond, Holland	Hamburg, Germany
Essential Oils	*Artificial Musks*	*Aromatic Chemicals*

PERSONAL AND IMPERSONAL

Gold Dust Corp., Baltimore, has contracted for construction of three 45,000-pound capacity steel tanks for soap boiling. Hammond Iron Works, Warren, Pa., was awarded the contract for the three tanks.

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J. O. Adams Co., Boone, Iowa, makers of "Powdered Silk" hand soap, has recently been incorporated with a capitalization of $30,000. J. O. Adams serves as president temporarily, with J. E. Moser, vice-president and L. E. Adams, secretary and treasurer. Plans are under way for an enlargement of the Adams plant which will increase capacity considerably.

—o—

The team representing Carbide & Carbon Chemical Co. in the wholesale drug trade bowling association of New York was in first position in league standing on November 25th, with 7 wins and 2 losses. The E. R. Squibb team was in second place with 6 wins and 2 losses. Colgate-Palmolive-Peet Co. and Roessler & Hasslacher Chemical Co. were tied for third, each with 5 wins and 4 losses.

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Zoro Co., formerly located at 129 N. Halsted street, Chicago, has moved to 361 W. Superior street.

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A new shaving cream which is said to remove hair without use of a razor is being marketed by Shavol Corp. of America, New York, under the name "Raz-O-Less."

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"Bathodora" bath salts have been introduced by Schieffelin & Co., New York. The new product is packed in a tall, slender, green and silver can.

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Benjamin Levitt, Chief Chemist for Chas. W. Young & Co., Philadelphia soap manufacturers, delivered a lecture before the Philadelphia section of the American Association of Textile Chemists and Colorists, at the Elks Club, Camden, N. J., November 20, 1931. The subject of the lecture was "The Use of Soap in the Textile Industry."

Chesebrough Manufacturing Co., a subsidiary of Colgate-Palmolive-Peet Co., has declared an extra dividend of $1 per share on its capital stock in addition to the regular quarterly dividend of $1, both payable December 30th to stock of record December 10th.

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W. M. Ruthrauff, filer of the "Pepsodent" toothpaste patent, has been denied two new patents for dentifrices by the U. S. District Court of Delaware on the ground that they lack novelty and utility. The only novel feature of the new patents was a theory of teeth classification which was held to be unsound.

—o—

Los Angeles Soap Co., Los Angeles, has leased 2,000 square feet of space in the Coca-Cola building, Kansas City, for a sales and distribution branch. About twenty-five employees will be maintained. L. A. Pearre will take charge of the sales organization and C. J. Johnson will be in charge of the accounting department. The sales organization will cover Western Missouri and Kansas.

—o—

Lee H. Bristol, vice-president of Bristol-Myers, Inc., addressed the *New York Times* class in national advertising in newspapers recently on the subject, "How To Advertise a Low Priced Product." Mr. Bristol was re-elected president of the Association of National Advertisers at the Washington meeting held November 16 and 17.

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The advertising account of Forhan Co. will be directed in Canada and England after January 1 by McCann-Erickson, Inc.

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Soap will be manufactured as one of the products of Muscle Shoals Laboratories which recently opened a plant at Muscle Shoals City, Alabama. The new company, organized by R. M. Saliba, will also make cosmetics of various types.

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Joseph A. Huisking, vice-president of Charles L. Huisking & Co., New York in charge of the firm's essential oil department, recently started his twentieth year with the company.

The Pullman Co. started several months ago to supply a line of toilet preparations which includes toothpaste, shaving cream, talcum powder, etc., to passengers on Pullman cars. The service has met with favor, and it is planned to extend the range of toiletries offered.

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McKesson & Robbins, Inc., has decided to omit its regular quarterly dividend of 25 cents a share which would be payable at this time. The regular preferred dividend of 87½ cents a share was paid December 15 to stock of record December 5.

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Henry Warner Ells, who retired thirty years ago as manager of the New York office of Procter & Gamble Co., died of toxemia poisoning, November 21, at the *Hotel New Yorker*.

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Theodore Swann, president of Swann Corporation has been made a member of the Alabama Industrial Development Board for a twelve-year term.

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Procter & Gamble Co., Cincinnati, has turned advertising of "Oxydol" over to Erwin, Wasey & Co., New York, and has appointed Dedlar & Ryan, Inc., New York, to handle "Camay" advertising. Blackman Company continues as general agent for the rest of the company's advertising account.

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"Ipana" tooth paste is being advertised for the first time in Australia in a newspaper campaign which has just been opened by Bristol-Myers Co., Ltd., Australia.

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United Africa Co., New York, has announced a change in its telephone number which will now be MUrray Hill 4-6120.

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The Cleveland premium room of M. Werk, Cincinnati, has been moved to 2402 Carnegie avenue.

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Spencer Kellogg & Sons, Inc., earned a net profit of $643,518 during the year ended August 31st, as compared with $636,614 in the eleven months ended August 30, 1930.

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Procter & Gamble Manufacturing Co. has filed an appeal against a recent decision of the U. S. Customs Court which held that whale oil rendered on board a Norwegian vessel in the Antarctic and brought into the United States was a foreign import and so dutiable under the 1930 Tariff Act. Procter & Gamble denied that the Antarctic was Norwegian territory and also attacked the validity of the Court's claim that ships at sea and the property in them are a part of the country to which they belong. The appellants claim that the whale oil should be admitted duty free.

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Harvey C. Morris, service expert in the naval stores department of Hercules Powder Co., died recently. He had been with the company for eight years and for the past four years has been a travelling representative.

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The properties and uses of carbon tetrachloride are described in a 32-page booklet recently issued by Roessler & Hasslacher Chemical Co., Niagara Falls, N. Y. Among the uses mentioned are its use as an ingredient in textile soaps, as a base solvent for cleaning preparations, use in paste soaps, polishes, waxes, etc. It is also recommended as suitable for fumigating furs in closed storage space, at a delousing agent and as a parasiticide for some stored cereals. Copies of the booklet may be obtained by addressing Roessler & Hasslacher Chemical Co.

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Magnus, Mabee & Reynard, Inc., New York essential oil house, has recently appointed C. W. Merrell as a special sales representative to travel in the states of Ohio and Michigan, also in part of Canada. A. Belknap Foster, senior sales representative of the M. M. & R. organization, who previously covered Mr. Merrell's allotted territory, will now concentrate his efforts in the state of New York.

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Goslin Birmingham Mfg. Co., New York, manufacturers of machinery, has moved its offices to 136 Liberty street from 82 Beaver street.

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Harry R. Gray, credit manager of Swift & Co., Chicago, and long identified with the company, ended his life November 25 by shooting himself. He had recently been in poor health.

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The offices of Vegetable Oil Products Co., Los Angeles, have been removed to their Warehouse at 6100 Avalon boulevard. The new telephone number is Adams 12131.

—o—

The Story of Phoenix Metal Caps is the title of a booklet recently issued by Phoenix-Hermetic Co., Chicago. It tells the story of the raw materials which go into the manufacture of caps, outlines the manufacturing process and illustrates a number of the Phoenix cap types.

ON PRODUCTS AND PROCESSES

In a study of the action of antioxidants on the oxidation of fatty oils, determinations were made of the iodine number, acid number, saponification number, density and viscosity of olive and castor oils oxidized by bubbling dry carbon-dioxide-free air through samples heated to 80°, 100° and 120° C. Diphenylhydrazine or alpha-naphthylamine, in varying amounts, were added to some of the samples oxidized at 100°. It is said that the results of the iodine number determinations, which were considered the best means available for measuring the extent of oxidation, can be expressed as a function of time of oxidation by the equation: $K \ln a/(a - x) = t - b$, a being the iodine number of the unoxidized oil, x the decrease in iodine number during the time of oxidation t, b a constant corresponding to the induction period and K a constant. At constant temperature, the addition of increasing amounts of an antioxidant caused a continuous increase in the induction period but did not affect the shape of the oxidation curve once oxidation had begun. *Bull. mat. grasses Inst. colonial Marseille* 15, 65-84 (1931).

It is said that there is no equilibrium in salt content between settled soap and its "niger." The salt content of the settled soap depends upon the completeness of separation of the soap from the "niger." The sweating of grained soap occurs only in rare cases through the separation of lye from the soap, being more usually caused by a lowering of temperature and recondensation of water previously escaped from the soap. *Seifensieder-Ztg.* 58,556 (1931).

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A recently patented soap contains about 0.2% of 4-hydroxybiphenyl as a stabilizer. U. S. Pat. No. 1,820,744.

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As a result of experiments on the oxidation of olive oil at 100° C., as influenced by antioxidants, the antioxidative action of hydroquinone is said to be greater than that of diphenylguanidine, while that of the latter substance is considered greater than that of diphenylamine or that of alpha-naphthylamine. (*J. Chem. Soc. Jap.* 51,602-7 *Chem. Abstr.* 25,600-1 (1931)

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A newly proposed process for the purification of glycerol eliminates distillation and depends on on the use of slaked lime as a purifying agent. Crude glycerol is diluted and heated with slaked lime. Carbon dioxide is passed in to neutralize the mixture, the calcium carbonate resulting is filtered out with other impurities, and the filtrate passed through bone-black. After concentration it is not of U.S.P. quality, but may be used for technical purposes. *J. Am. Pharm. Assoc.* 20,762-3 (1931).

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In a recent German patent for producing odorless soap from fish oil or whale oil, it is proposed to blow the soapstock oil or oils with air under partial vacuum conditions. Ger. Pat. No. 374,891.

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Recently patented formulae for cleansing soaps include the following:

1. Coconut oil 100, potash lye (30° Be.) 65, glycerol 40, benzol or light naphtha 5 parts. Fr. Pat. No. 675,321.
2. Stearic acid 20 parts, is in part saponified by a lye containing 80 parts of quicklime high in magnesia content, and into this mixture is incorporated thoroughly 40 parts of kerosene to form a homogeneous mixture. U. S. Pat. No. 1,743,865.
3. Soap is dissolved in an organic solvent, alcohol, that is miscible with water, to bring the mixture to a clear solution, after the addition of a cleansing aromatic hydrogenated hydrocarbon. Swiss Pat. No. 133,808.

—o—

For the production of a white rosin soap, it is proposed to treat the rosin with oxalic acid in the presence of an unsaturated fatty acid at 140 to 160° and then treat the mixture at 180° C. with a zince chloride catalyst. Fr. Pat. No. 665,525.

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A recent investigation of the action of powerfully active phenols as germicides in soap arrived at the conclusion that phenolic compounds are unsuitable for antiseptic reagents in soap. Only when an excess of alphaphenol is used with soap is there a possibility of producing a germicidal soap. The higher phenols such as hexylresorcinol may be used under certain conditions, but the cost is generally prohibitive. It is said that the germicidal activity of the phenols is interfered with by the disperse phase rather than the gel phase in the soap solution.—*The Manuf. Chem.*

PERFUMES

specially created for

Adventuring into the field of research, we have determined by practical tests with soap, the perfume raw materials which impart the maximum odor at a minimum cost. Answering the demands of our trade, we are rapidly putting into practise the results of this research and have already prepared a few new soap perfumes containing these super-efficient perfume bases.

Samples are at your disposal on request.

Modern types recently added to our line and now available are:—

●

CHYPRE
FOUGERE
JASMINE
HYACINTH
LAVENDER
EAU DE COLOGNE
LILAC
VIOLET
NARCISSUS
HONEY
ORCHID
LOCUST
ORANGE BLOSSOM
MIMOSA
VERBENA
PINE

FRITZSCHE BROTHERS, INC.

Proprietors of
PARFUMERIES DE SEILLANS
Seillans, France

•

78-84 BEEKMAN ST.
New York, N. Y.

•

Sole Agents in the U. S. and Canada for
SCHIMMEL & COMPANY
Miltitz (near Leipzig) Germany

Say you saw it in SOAP!

RECORD OF TRADE-MARKS

The following trade-marks were published in the November issues of the *Official Gazette* of the United States Patent Office in compliance with Section 6 of the Act of September 20, 1905, as amended March 2, 1907. Notice of opposition must be filed within thirty days of publication. As provided by Section 14, fee of ten dollars must accompany each notice of opposition.

Trade Marks Filed

Texto—This in outline letters appearing in both horizontal and vertical positions to give cross effect describing soap substitute. Filed by Texto Products Co., Chicago, Sept. 2, 1930. Claims use since Aug. 1, 1930.

Savon-Eze—This in solid letters describing liquid soap. Filed by Silk-Eze Corp., Boston, July 7, 1931. Claims use since February, 1931.

Minimax—This on reverse plate running diagonally across striped shield background describing soap. Filed by Hilton Hotels, Inc., Dallas, Sept. 21, 1931. Claims use since Jan. 1, 1927.

Koolox—This in solid letters describing shaving cream. Filed by Rit Prods. Corp., Chicago, Sept. 21, 1931. Claims use since Aug. 21, 1931.

Sparkl—This in outline letters with star shapes describing chemical cleaner. Filed by Ward Chemical Corp., Tulsa, Okla., Jan. 24, 1931. Claims use since Jan. 1, 1930.

R-Wellene—This in tooled letters describing antiseptic. Filed by Arwell Prods. Co., Waukegan, Ill., September 11, 1931. Claims use since Aug. 21, 1931.

Gabilla—This in solid letters describing toilet soap. Filed by Gabilla, Inc., New York, Mar. 3, 1931. Claims use since 1910.

Tuxedo—This in solid letters describing cleaner. Filed by 2 In 1-Shinola-Bixby Corp., New York, May 21, 1931. Claims use since 1915.

Virgin—This in solid letters together with picture of girl describing soap. Filed by Vincent Fanelli, Phoenix, Ill., May 27, 1931. Claims use since 1927.

White Lilac—This in solid letters together with signature of applicant describing washing preparation. Filed by Joseph Fonte, Cleveland, Aug. 14, 1931. Claims use since June 16, 1931.

Klerite Kleaner—This in solid letters describing cleaning compound. Filed by Carteret Chemical Co., Morehead City, N. C., Aug. 18, 1931. Claims use since July 1, 1930.

D-Y—This in outline letters describing cleanser. Filed by Davies-Young Soap Co., Dayton, O., Sept. 29, 1931. Claims use since Aug. 15, 1931.

Bug-Ded—This in tooled letters describing liquid insecticide. Filed by Midway Chemical Co., Chicago, Aug. 17, 1931. Claims use since Mar. 16, 1928.

Carv-Asept—This in solid letters describing disinfectant and insecticide. Filed by Heyden Chemical Corp., New York, Aug. 24, 1931. Claims use since June 30, 1931.

Ty-Tone—This in solid letters against lined background describing dental antiseptic. Filed by Ty-Ton Co., Erie, Pa., Sept. 19, 1931. Claims use since May 4, 1931.

Mips—This in solid letters describing insecticide. Filed by S. F. Moulton, Los Angeles, Sept. 23, 1931. Claims use since Sept. 11, 1931.

Katol—This in solid letters on circular background describing insecticide. Filed by Orange Mfg. Co., Orlando, Fla., Sept. 24, 1931. Claims use since June 23, 1931.

Salomint—This in solid letters on diamond shaped background describing tooth paste. Filed by Sal-O-Dent Labs., Inc., San Antonio, Tex., Sept. 25, 1931. Claims use since Aug. 25, 1931.

Krest Brand—This on reverse plate with double shields bearing letters KDS describing cleaner, shaving cream, shoe polish, and washing compound. Filed by Kresge Dept. Store Corp., Newark, N. J., May 6, 1931. Claims use since June 27, 1929.

Tiolene—This in solid letters describing toilet, laundry and automobile soap. Filed by Pure Oil Co., Chicago, July 27, 1931. Claims use since Dec., 1921.

Klint Kleaner—This in solid letters describing chemical cleaning compound. Filed by Clinton Chemical Wks., Inc., Clinton, Mass., Aug 28, 1931. Claims use since June 22, 1931.

Sani-Septo—This in solid letters describing liquid surgical soap. Filed by Hillyard Chemical Co., St. Joseph, Mo., Oct. 12, 1931. Claims use since May 1, 1931.

Escomo—This in outline letters describing laundry blue. Filed by Cowles Detergent Co., Cleveland, Oct. 1, 1931. Claims use since May 1, 1931.

Mallen—This in solid letters with picture of ship describing soap. Filed by Maude Allen, Kansas City, Mo., Feb, 12, 1931. Claims use since Sept. 15, 1930.

L. S. Alkali—This in solid letters with word "Wyandotte" describing cleaning and detergent materials. Filed by J. B. Ford Co., Wyandotte, Mich., Aug. 24, 1931. Claims use since July 23, 1931.

Cleanzine—This in solid letters describing soap. Filed by Cleanzine Mfg. Co., Brooklyn, Aug. 28, 1931. Claims use since June 12, 1931.

Mark representing Hebrew character "R" describing soap. Filed by Morris Wishnetzky, New York, Sept. 17, 1931. Claims use since June 1, 1931.

Mark representing Hebrew character "S" describing soap. Filed by Morris Wishnetzky, New York, Sept. 17, 1931. Claims use since June 1, 1931.

Mark representing Hebrew character "K" describing soap. Filed by Morris Wishnetzky, New York, Sept. 17, 1931. Claims use since June 1, 1931.

Silver Cotton—This in solid letters with picture of rose describing polish. Filed by California Silver Cotton Co., Berkeley, Calif., Sept. 18, 1931. Claims use since April 1, 1931.

Evangeline—This in tooled letters together with picture of maid describing polish, shoe cleaners and dry cleaner. Filed by Evangeline Co., Brooklyn, Sept. 28, 1931. Claims use since June 15, 1931.

Delettrez—This in solid letters describing laundry, toilet, shaving cream soaps. Filed by Vadsco Sales Corp., New York, Oct. 2, 1931. Claims use since Sept., 1927.

Velva-Babe—This in solid letters describing liquid baby soap. Filed by Hillyard Chemical Co., St. Joseph, Mo., Oct. 12, 1931. Claims use since May 1, 1931.

Borite—This in broken letters describing cleaner. Filed by Milwaukee Chemical Co., Milwaukee, Oct. 16, 1931. Claims use since Oct. 13, 1931.

Neosol—This in broken letters describing soap powder. Filed by Milwaukee Chemical Co., Milwaukee, Oct. 16, 1931. Claims use since Oct. 13, 1931.

Igepon—This in solid letters describing washing and scouring agent. Filed by General Dyestuff Corp., New York, Oct. 19, 1931. Claims use since Apr. 3, 1931.

Pepsodent Antiseptic—This on reverse plate on bottle describing antiseptic. Filed by Pepsodent Co., Chicago, Dec. 23, 1930. Claims use since Oct. 23, 1929.

Shoofly—This in solid letters describing insecticide. Filed by Enterprise Mfg. Co., Akron, O., Aug. 13, 1931. Claims use since 1894.

Ant Eater—This in broken letters describing ant poison. Filed by "Ant Eater," Los Angeles, Aug. 26, 1931. Claims use since July 1, 1931.

Weedex—This in solid letters describing chemical weed exterminators. Filed by Koppers Prods. Co., Pittsburgh, Pa., Sept. 15, 1931. Claims use since Aug. 10, 1931.

Citradent—This in solid letters describing dentifrice. Filed by Citradent Co., Indianapolis, Sept. 28, 1931. Claims use since July 8, 1931.

Palmolive Shampoo—This on reverse plate with head of girl describing shampoo powder. Filed by Colgate-Palmolive-Peet Co., Chicago, Oct. 1, 1931. Claims use since Apr. 14, 1930.

—o—

Trade Marks Granted

288,632. Disinfectant in Soluble Tablet Form. Elham Products Co., Chicago. Filed July 13, 1931. Serial No. 316,885. Published August 25, 1931. Class 6.

288,645. Insecticide. Sure-Kil Co., Chicago. Filed June 22, 1931. Serial No. 316,145. Published August 18, 1931. Class 6.

288,658. Liquid Insecticide. Midway Chemical Co., Chicago. Filed May 25, 1931. Serial No. 315,002. Published August 25, 1931. Class 6.

288,846. Soap Flakes, Granulated, and Liquid Soap. Colgate-Palmolive-Peet Co., Chicago, Filed January 30, 1931. Serial No. 310,555. Published August 25, 1931. Class 4.

288,851. Cleaning Compound. Huntington Lab., Inc., Huntington, Ind. Filed May 18, 1931. Serial No. 314,698. Published August 18, 1931. Class 4.

288,854. Cleaning Powder. Levin Chemical Co., Newark, Ohio. Filed May 26, 1931. Serial No. 315,056. Published August 25, 1931. Class 4.

288,857. Cleaning Compound. Klaro Products Co., New Bedford, Mass. Filed June 15, 1931. Serial No. 315,844. Published August 18, 1931. Class 4.

288,860. Soaps. Rosa Toiletries, Los Angeles. Filed June 16, 1931. Serial No. 315,941. Published August 18, 1931. Class 4.

288,910. Metal Polish. Crowell Chemical Co., East Rutherford, N. J. Filed June 22, 1928. Serial No. 268,488. Published August 18, 1931. Class 4.

288,957. Soap. Holmes Henry Plott, Canton, N. C. Filed June 10, 1931. Serial No. 315,646. Published August 18, 1931. Class 4.

288,958. Soap. Swift & Co., Chicago. Filed July 13, 1931. Serial No. 316,910. Published August 25, 1931. Class 4.

289,028. Wax Polishing Compound. Diamond Surfacing Products Co., Rhode Hall, Jamesburg, N. J. Filed January 8, 1931. Serial No. 309,759. Published September 1, 1931. Class 16.

289,064. Insect Powder, Disinfectants, and

Liquid Insecticide, Ralston Purina Co., St. Louis. Filed June 11, 1931. Serial No. 315,697. Published August 18, 1931. Class 6.

289,077. Germicidal Detergent Soap. Frederick Stearns & Co., Detroit. Filed June 19, 1931. Serial No. 316,057. Published September 1, 1931. Class 4.

289,088. Insecticides. Ohio Valley Drug Co., Wheeling, W. Va. Filed May 28, 1931. Serial No. 315,158. Published August 18, 1931. Class 6.

289,089. Liquid Antiseptic. Smith & Co., Oklahoma City, Okla. Filed June 1, 1931. Serial No. 315,285. Published August 18, 1931. Class 6.

289,095. Insecticide. Central Chemical Co., Inc., Hagerstown, Md. Filed July 2, 1931. Serial No. 316,552. Published September 1, 1931. Class 6.

289,104. Soap. Welters Mfg. Co., Jacksonville, Fla. Filed July 21, 1931. Serial No. 317,186. Published September 1, 1931. Class 22.

289,119. Nonsaponifying Washing Powder. Dixie Chemical Products Co., Birmingham, Ala. Filed November 28, 1928. Serial No. 275,946. Published September 1, 1931. Class 4.

289,150. Rodent Exterminating Preparation, Insecticide, and Deodorant. Acme Disinfectant Co. and A A A Exterminating Service, Washington, D. C. Filed July 9, 1931. Serial No. 316,774. Published September 1, 1931. Class 6.

289,155. Antiseptic. Samson Rosenblatt, New York. Filed July 11, 1931. Serial No. 316,850. Published September 1, 1931. Class 6.

289,303. Shaving Soap and Sticks. Colgate-Palmolive-Peet Co., Chicago. Filed July 10, 1931. Serial No. 316,807. Published September 8, 1931. Class 4.

—o—

A reference manual on wooden box and crate construction has been prepared by the national Association of Wooden Box Manufacturers, so that box and crate makers will be better able to serve manufacturers and shippers. The manual lists latest recommendations for proper construction of boxes and crates for packaging any commodity.

—o—

A new superfatting agent recommended for use in the production of cold made coconut oil soaps and shaving soap has been introduced in the United States market by Ce-Thor Chemical Co., New York. It is sold under the name, "Cereps," and is manufactured by Dr. L. Schaumann Co., Nahlstorf, Berlin, Germany. Because of its aid in the formation of a full, firm and durable lather in soaps it is said to have found considerable popularity abroad.

New Patents

Conducted by
Lancaster, Allwine & Rommel
Registered Attorneys
PATENT AND TRADE-MARK CAUSES
402 Ouray Building, Washington, D. C.

Complete copies of any patents or trade-mark registrations reported below may be obtained by sending 25c for each copy desired to Lancaster, Allwine and Rommel. Any inquiries relating to Patent or Trade-mark Law will also be freely answered by these attorneys.

No. 1,828,361. Cake of Soap. Patented October 20, 1931, by Charles Archibald Crary, Wyoming, and Thomas F. Crary, Middleport, Ohio. A cake of milled soap having bores extending thereinto from opposed portions of the cake, the bores being of small diameter but of sufficient depth and number to render the cake buoyant, the outer ends of the bores being substantially open and the inner ends closed.

No. 1,829,522. Detergents and in Washing. Patented October 27, 1931, by Herbert A. Kern, Hinsdale, and Gail J. Fink, Oak Park, Ill., assignors to National Aluminate Corporation, Chicago, Ill. Process of preventing the adherence of precipitates of manganese and iron hydroxides to fabrics when laundering the latter which comprises adding to the laundering fluid a composition containing 85 parts of soda ash and 15 parts of sodium aluminate.

No. 1,827,549. Manufacture of Transparent Soap Tablets Containing Advertisements. Patented October 13, 1931, by Ena Villain, Dulwich, London, England. A process for making a transparent soap tablet with an advertisement embedded therein, comprising enveloping the advertisement in a transparent envelope of very thin sheet cellulose sulphate forming a basic tablet of transparent soap with a depression in the top face extending to the medial plane of the basic tablet, laying the enveloped advertisement in the bottom of the depression, warming up the basic tablet to soften it, filling up the depression with molten transparent soap of the same kind as the transparent soap constituting the basic tablet, and finally compressing the whole by means of the soap press to form the complete tablet.

—o—

United States exported 433,306 pounds of toilet or fancy soap during June, 1931, the value being $96,306. This compares with exports of 447,563 pounds, worth $89,185, in June, 1930.

NEW-O-SAPINE

is an ideal superfatting
and neutralizing agent for

Toilet Soaps—
Shaving Soaps—
Shaving Creams

NEW-O-SAPINE is the only superfatting agent of its kind and is used the world over.

—prevents soap from getting rancid, even if stored for many years.
—eventually binds free alkali in the soap to produce an absolutely neutral soap.
—imparts to soap the much desired velvet feel and high gloss.
—improves the lathering quality of the soap.
—enhances the color of the soap.
—increases washing efficiency.
—prevents formation of scale and cracks.
—preserves the perfume of the soap.
—produces a soft thick lather.
—is free from adeps lanae or vaseline.
—is free from water.
—will prevent shrinkage.

NEW-O-SAPINE will improve any cold made cocoanut oil soap. Samples and full information will be furnished promptly on request.

WELCH, HOLME & CLARK CO., Inc.

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563-565 Greenwich Street **New York, N. Y.**

Sole Agents in U. S. A. and Canada for the Manufacturers

H. WERTHEIM SOEHNE—BERLIN, GERMANY

Say you saw it in SOAP!

CONTRACTS AWARDED

Day & Frick Soap Works has recently been awarded the contract for 100,000 cakes of grit soap for Brooklyn army quartermaster at a price of 2.7c. Also awarded the following: 3,000 cakes of grit soap at 3.45c; 1,900 cakes grit soap at 3c; 1,100 cakes grit soap at 3.15c; 1,000 cakes grit soap at 3c. Competing bids were entered by Stevens Soap Corp. as follows: 100,000 cakes grit soap, 3.04c; 3,000 cakes grit soap, 3.8c; 1,900 cakes, 3.4c; 1,100 cakes, 4.1c; and 1,000 cakes, 3.4c. Will & Baumer Candle Co. was successful bidder on 12,000 lbs. paraffin, contract for which was obtained at a price of 12c.

—o—

The following bids were entered on 12,000 lbs. soap for U. S. Marine Corps, Philadelphia, in a recent bidding: Jergens-Woodbury Sales Corp., Cincinnati, 3.25c. cake; Boyer Soap Mfg. Co., Phila., 5.728c.; Procter & Gamble Distributing Co., Phila., 6.79c.; John T. Stanley Co., New York, 8c.; Armour & Co., Chicago, 6.295c.; General Soap Co., San Francisco, 4.98c.; Swift & Co., Phila., 6.24c.; J. Eavenson & Sons, Camden, N. J., 5.85c.; Windsor Soap Co., Washington, 6.4c.; Larkin Co., Buffalo, 8.55c.; and Colgate-Palmolive-Peet Co., Chicago, 5.12c.

—o—

Alpha Chemical Co., Baltimore, was low bidder on 50 gals. soap for Washington, U. S. Marine Corps, in a recent bidding with a quotation of 24.5c. Other bids and bidders were: Davies-Young Soap Co., Washington, 28c.; Unity Sanitary Supply Co., New York, 55c.; James Good, Inc., Phila., 36c.; Leeno Products, Inc., Baltimore, 29c.; U. S. Sanitary Specialties Corp., Chicago, 39c.; Colgate-Palmolive-Peet Co., Chicago, 30c.; R. M. Hollingshead Co., Camden, N. J., 25c.; Crystal Soap & Chemical Co., Phila., 28c.; Iowa Soap Co., Burlington, Ia., 26c.; Hubbs & Corning Co., Baltimore, 48c.; Mathers-Lamm Paper Co., Washington, 34.5c.; Samuel Lewis, New York, 50c.; Quality Products Laboratories, Richmond, Va., 46c.; Clifton Chemical Co., New York, 33c.; and Factory & Yard Supply Co., New York, 34c. Walter W. Miller Co., Indianapolis, was low bidder on 5 drums cleaner with a quotation of 4c. Other bids and bidders were: Cowles Detergent Co., Cleveland, 7.5c.; U. S. Sanitary specialties Corp., Chicago, 4.5c.; J. B. Ford Sales Co., Wyandotte, Mich., 7.48c.; Crystal Soap & Chemical Co., Philadelphia, 4.85c.; Skour-Nu, Inc., New York, 15c.; Detergal Chemical Supply Co., Baltimore, 7.07c.; and Mathers-Lamm Paper Co., Washington, 7.15c.

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The following awards have been made in a recent Chicago quartermaster's bidding: Armour & Co., Chicago, 720 lbs. laundry soap, 2.99c.; 6,600 lbs., 3c.; 13,020 lbs., 2.94c.; 2,400 lbs., 3.15c.; 6,000 lbs., 3.01c.; 4,800 lbs., 2.87c.; 600 lbs., 2.65c.; 900 lbs., 2.91c.; 9,000 lbs., 2.58c.; 3,000 lbs., 3c.; 5,340 lbs., 2.65c.; 120 lbs., 2.65c.; 200 cans scouring powder, 2.68c. Swift & Co., 1,500 lbs. laundry soap, 3.27c. Windsor Soap Co., Washington, 200 cakes toilet soap, 3.75c. Stevens Soap Co., Brooklyn, 72 cakes grit soap, 2.7c. Hunnewell Soap Co., Cincinnati, 300 cakes grit soap, 2.35c.; 200 cakes, 2.35c.; 300 cakes, 2.35c.; 400 cakes, 2.35c.; 600 cakes, 2.35c.; 600 cakes, 2.35c.; 300 cakes, 2.35c.; 400 cakes grit soap, 2.35c. Colgate-Palmolive-Peet Co., Chicago, 1.500 cakes toilet soap, 2.1c.; 500 cakes 2.1c.; 1,200 cakes, 2.1c.; 600 cakes toilet soap, 2.1c.

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Report on Insecticide Enforcement

In the enforcement of the Insecticide Act of 1910 for the 1931 fiscal year, the solicitor for the Department of Agriculture prosecuted to conclusion 30 cases arising out of alleged violations, he states in his annual report. During the year, 21 cases were reported to the attorney general, in five of which, involving 13 violations, criminal proceedings were recommended. Sixteen seizure cases also came under his supervision. Of the 28 cases carried over from 1930, 15 were terminated in 1931, and a like number of new complaints were disposed of, eight of the total being criminal and 22 civil, according to the report of Solicitor Elton L. Marshall.

His tabulation of litigation bearing upon the insecticide act concluded during the year shows the following: Fines were imposed in three cases under guilty pleas; four cases were dropped or dismissed; a court verdict of not guilty was entered in one instance. Sixteen of the seizure cases were terminated on default decrees of condemnation, forfeiture and destruction of the goods; two consent decrees were entered and the goods were taken down under bond; in one case the court gave a verdict and judgment for the government which was followed by destruction of the goods; in three cases, dismissals were granted. Fines collected totaled $160.

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ESTABLISHED IN 1798

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SYNTHETIC AROMATICS
COMPOUNDED PERFUME BASES
For the Soap and Insecticide Industries

OUR OWN DISTILLATIONS
FROM SELECTED RAW MATERIALS
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An aged oil of exceedingly fine quality

We also offer our special selections.

OIL GERANIUM BOURBON
OIL GERANIUM ALGERIAN
OIL BOIS DE ROSE (ROSEWOOD OIL)

Prices for all of the above
oils are still exceptionally low.

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180 VARICK STREET NEW YORK, N. Y.

"The integrity of the house is reflected in the quality of its products"

Say you saw it in SOAP!

Market Report on

ESSENTIAL OILS AND AROMATICS

(*As of December 7, 1931*)

NEW YORK—Mixed priced movements were the rule in the market for essential oils and perfuming materials during the period just closed. Where higher levels were reached the advances were usually due to firmer positions taken by suppliers rather than to any increase in demand. In the instances where lower prices were named the cause was usually need of producers for cash. With plentiful stocks and slack demand they were able to convert their holdings into cash only by making concessions to buyers. Among the oils to drop were anise, Java citronella, Bourbon geranium, otto of rose and sandalwood. Oils on which higher prices were quoted included bergamot and peppermint.

Oil Anise

The advance of last month occasioned by the prospect of interference with Chinese shipments of anise oil failed to hold during the recent period as shipments continued to come in as usual. Another weakening factor in the market was the drop in sterling. Quoted prices in the local market dropped off to 40c. pound.

Oil Bergamot

One of the few oils to show any definite firmness this period was bergamot. Early in the period a 40c. per pound advance in the primary market was reported as a result of the activities of the new Italian association. The spot market here did not advance so abruptly as dealers are still skeptical as to the ability of the association to make its advances hold. Local quotations now range upward from about $1.95 pound.

Oil Citronella

A general weakness in the primary market caused a drop in the price of Java citronella oil which is now offered at 52c. pound. Stocks are reported to be plentiful, and sellers were forced

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White Crystals with Fine Natural Odor for mentholated shaving creams, soaps, shampoos, lotions, creams,

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Synthetic

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to accept lower offers to convert their holdings into cash. Ceylon oil was unchanged in price, but the primary market was said to be easier.

OIL GERANIUM

Fairly good stocks of Reunion oil and an absence of buying in this market were responsible for a moderate drop in the price of Bourbon oil. The inside figure is now $3.70 pound.

OIL PEPPERMINT

Producers now have much firmer ideas as to selling prices for this oil which has lately advanced from previous low quotations. The present range is from $1.50 to $1.70 pound.

OTTO OF ROSE

A further decline of 50c. an ounce was reported this period, bringing the price down to $8.50 an ounce. Bulgarian producers are reported to be holding plentiful stocks on which they are anxious to realize.

OIL SANDALWOOD

Offers of U. S. P. sandalwood oil at prices as low as $6.50 pound have been made in this market in recent weeks, according to trade reports. The oil bearing the Mysore government label, however, is being maintained at previously quoted prices. The Mysore representative is expected to be in this country shortly to negotiate contracts for 1932.

—o—

Joseph F. Scanlon has been placed in full charge of the operations of Coty, Inc., following the resignation of Benjamin Levy as chairman of the board of directors.

—o—

W. B. Cartwright, Ltd., Rawdon near Leeds, England, are desirous of locating the American manufacturers of "Wanda" toilet soap, and "Fioret" face powder.

—o—

Editorial

(*From Page* 20)

used to prove that everlasting prosperity was here in 1929, is now used as conclusive evidence that the first and only permanent depression of history has arrived. In spite of the gloom mongers, we will probably soon all arrive back somewhere near a normal middle course, sadder but wiser. And when we do, don't let us all forget to give low cost tallow a kiss good-bye for another decade at least. The bitter goes with the sweet.

Super Water Soluble Essences

SPECIAL QUALITY

In addition to our Water Soluble Essences brought to your knowledge in the November issue, we call your attention to the higher quality named above (special quality).

While these essences are more expensive, they nevertheless will give an equally low cost price for the reason that only ¼ oz. to ½ oz. to a gallon will be required.

The further advantage is that they will dissolve perfectly clear in water and that an addition of alcohol will not change the character.

These essences will give satisfactory results for a great many purposes and we invite you to experiment with samples which we will be glad to supply.

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COLUMBIA BRAND

98% - 100% CAUSTIC SODA

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Ground — Liquid

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Plant at BARBERTON, OHIO

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Market Report on

SOAP AND DISINFECTANT CHEMICALS

(*As of December* 7, 1931)

NEW YORK—During the period just closed the opening guns of the 1932 contracting ceason were fired, and interest at this time is focussed on contract prices and buyers' reactions. The alkali schedule was made known late in November, and quoted prices proved to be about the same as the 1931 schedule. Adherence to quoted levels will, however, mean a substantial advance, as the bulk of the 1931 contracts were written far below the quoted level of prices. Producers report that there is no strong resistance on the part of buyers to present offers, and contracting is said to be proceeding at a satisfactory rate. From the alcohol market comes the prediction that 1932 prices will be somewhat higher. Glycerine quotations remain steady in spite of the slack market which has resulted from failure of the anti-freeze demand to assume usual proportions. Mixed price movements were noted in the naval stores market, as the season drew to a close.

ALKALIS

Producers are concluding their first two weeks of contracting for the 1932 season, and report that satisfactory progress has been made and that there has been firm adherence to quoted levels. Solid caustic is offered at $2.50, flake at $2.90 and liquid at $2.15. These prices are the same as the 1931 schedule which was not, however, closely adhered to. Spot quotations are 5c. pound higher in each case. Soda ash quotations are as follows: bulk cars, $1.00 per 100 lbs., paper bags, $1.12½; burlap bags, $1.15; and barrels, $1.38.

GLYCERINE

The only price movement in the glycerine market this period was a drop of ¼c. lb. in the price of C. P. glycerine. The market has been quiet all month due to inactivity in the anti-freeze trade. The unusually mild weather which has prevailed all through the Eastern part of the country has greatly retarded sales of glycerine for use in automobile radiators.

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INCORPORATED CLEVELAND

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Grasselli
TRI-SODIUM PHOSPHATE

THE Grasselli method of manufacture permits its Tri-Sodium Phosphate to cure. Hence *Grasselli* T.S.P. is always free flowing.

NON-SIFTING PACKAGES

Grasselli T.S.P. is shipped to you in barrels with paper liner. There is no loss either in transit or storage. Also available in kegs and bags. *Grades:* fine, globular, medium and coarse.

Let Grasselli figure on *your* T.S.P. requirements. Phone, write or wire any of the branches listed.

Of course it will be—

DIAMOND liquid CHLORINE

BEHIND the door of the Purchasing Department, materials for the mill are being discussed... their relative merits are being carefully weighed in the light of past experience. Then the question of liquid chlorine comes up. Of course, it will be "DIAMOND,"—its record in the mill speaks for itself. Satisfactory past experience plays an important part in leading many manufacturers to specify DIAMOND LIQUID CHLORINE ... always of the very highest quality ... always readily available in any quantity you may require.

Diamond Alkali Company

Pittsburgh, Pa. *and Everywhere*

DIAMOND *liquid* CHLORINE

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NAVAL STORES

The rosin market was quiet and inactive this period. Almost all the current crop has reached the market. There is no tendency on the part of either buyers or sellers to push matters. Prices were slightly higher at the close for the pale grades, although dark grades showed some loss. The schedule was: Grade B, $3.90; H, $4.15; K, $4.20; N, $5.95; WG, $7.20; WW, $7.60; wood, $4.00 to $4.20.

PYRETHRUM

There has been a sharp advance in the price of insect flowers over the past few weeks, importers' costs and selling prices having advanced four to five cents a pound. Whether this is merely a speculative movement or whether there is some real basis for such an advance in the disturbed Chino-Japanese relation has not as yet been revealed. Current quotations now range from 21c. to 23c. pound.

—o—

G. J. Dosch, formerly with United Chemical & Drug Corporation, has joined J. L. Hopkins & Co., New York, as sales manager, milling department. Thomas Sparks, formerly with McIlvaine Bros., is a new Hopkins representative in the Philadelphia district.

U. S. Sanitary Specialties Corp., Chicago, announces a new portable soap dispenser for hospital surgeries. It differs from the old model in that it has two spouts in place of the single swivel arm. It was designed after a survey of the requirements of the field.

—o—

A formula for the production of pine oil cattle spray has been developed by Hercules Powder Company. The new spray has an actual "knock down" of 99 per cent in ten minutes and an actual kill of 63 per cent twenty-four hours after spraying according to the originators. Hercules Powder Company does not propose to manufacture the finished cattle spray, it is stated, but has perfected the formula for the use of customers for its Yarmor pine oil.

—o—

Exports of disinfectants, deodorants, germicides, etc., from United States during September, 1931, totaled 144,237 pounds, worth $17,632, as against 157,771 pounds, valued at $30,609, during the same month of 1930.

—o—

L. Sonneborn & Sons, manufacturers of petroleum and sanitary products, are now located at 88 Lexington avenue, New York.

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--are Eloquent Salesmen!

WELL dressed in a strikingly decorated NILES Steel Container, your product makes a most favorable "first impression." Where competition is keen, this sturdy steel guardian becomes an eloquent salesman as well.

► Ask for convincing sample and prices. ◄

Let us assist you in modernizing the appearance and increasing the protection of your products. Sizes and closures are offered to meet every need.

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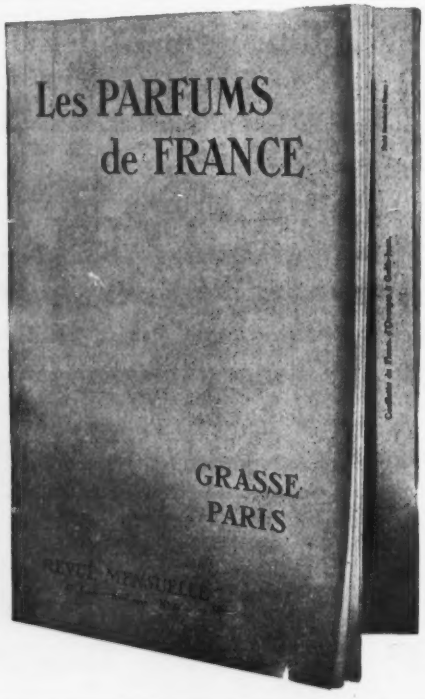

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Market Report on

TALLOW, GREASES AND OILS

(*As of December* 7, 1931)

NEW YORK.—Mixed price movements were the rule in the market for soapmaking oils, fats and greases during the period just concluded. While a number of the market leaders such as coconut oil, tallow and grease held the gains made last period, other items in the list dropped off. The soap trade continued to produce in good volume and is the most active consumer of oils and fats. Lately purchases have been somewhat smaller as is usual at this time of the year. Light stocks of coconut oil and smaller offerings of tallow were given as the reason behind the minor advances made on these products. Grease moved upward as a result of better demand. Among the oils to show declines were cottonseed, corn, whale and peanut, as well as lard and stearine.

Coconut Oil

This market still seemed to be in rather firm position at the close of the period, with the price of New York tanks standing at 3⅞c pound, ¼c lb. above the figure for last month's close. Reduction in spot supplies has made sellers more cautious about making offers. The advance in quotations has also caused buyers to slacken interest in this article, and the situation at the moment is very quiet.

Corn Oil

The advance in corn oil noted last month failed to hold and quotations were fractionally lower this period. The less favorable aspect of the grain and competing oil markets was credited with the relapse in corn oil prices. Mill tanks are now available at 3⅞c. lb., but both buyers and sellers seem disposed to await further developments.

Cottonseed Oil

The strength of security and commodity markets which stood back of the cottonseed oil price advance last period failed to be maintained during the past few weeks, with the result that cotton oil quotations dropped off again to a figure now only slightly above the low mark of two

USE THE SOLUTIONIZER TO BOOST 1932 SALES!

Here is the Solutionizer INSTALLED IN SOAP DRUM

READY TO USE!

All you have to do is turn on water faucet and hold receptacle under outlet pipe for suds. This eliminates wasteful hand-mixing. That is why the Solutionizer is time-labor-soap saving, and the most sanitary method of mixing soap solutions.

Up-to-date service station and garage managers are now asking their soap dealers to supply them with the new Plug Type Solutionizer because *they know* it saves time, and makes the soap go farther and last longer. Progressive manufacturers are meeting these demands because *they know* that 1932 is the year when they must give customers added values, and they know the Solutionizer is the greatest service ever offered soap consumers.

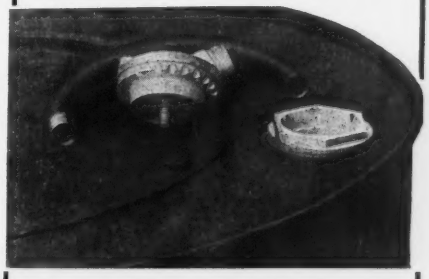
In planning your next year's sales campaign, why not add the Solutionizer to your list of selling points?

The Solutionizer Co.

1449 W. 69th St. Chicago

Distributed West of the Rockies by Turco Products, Inc., 1512 Industrial St., Los Angeles.

Here is the Solutionizer READY FOR SHIPMENT



The bottom unit is installed in soap drum before shipping—the top unit is shipped separately. Manufacturers find it practical to install a bottom unit in every drum, and supply each customer with a top unit which he can remove from the bottom unit in the empty drum and attach to the bottom unit in a full drum in a few seconds.

For High Grade Soaps Use a Quality Coconut Oil . . .

KELLOGG'S SILVER SEAL

UNIFORM high quality has made KELLOGG'S *Silver Seal* Coconut Oil an outstanding favorite. It is widely used by manufacturers of cold milled, pure white soaps in bars, chips, flakes, etc.—wherever quality matters most.

KELLOGG'S *Silver Seal* has a neutralized acid value and is practically neutral in color. It is guaranteed to contain a maximum of .07 free fatty acids; not to exceed .5 red and 5.0 yellow in color.

There are four other Spencer Kellogg Coconut Oils. In buying any of the five you are assured the best possible service—made possible by the maintenance of ample stocks in every key city listed below.

Use only the best. Be sure it's a Kellogg Brand.

SPENCER KELLOGG AND SONS SALES CORP'N

Administration Offices and Research Laboratories

BUFFALO, N. Y.

CRUSHING PLANTS—Manila, P. I. REFINERIES—Edgewater, N. J.; Kansas City, Kan. NEW YORK OFFICES—Graybar Bldg. WAREHOUSE STOCKS at Baltimore, Boston, Chicago, Cincinnati, Cleveland, Detroit, Kansas City, Milwaukee, New York City, Philadelphia, St. Louis

Tank Wagon Service in Greater New York

Kellogg's Coconut Oils

MANILA (Crude) - CRYSTALITE - SILVER SEAL COCHIN - KOLINE (Edible) - HYDROGENATED

Say you saw it in SOAP!

months ago. Crude is now quoted at 3⅜c lb., with P S Y at 4¼c.

GREASE

Grease continued to advance in price this period as buyers exhibited more interest in what are still very low quotations for this material. The price of house and yellow grease advanced to 3⅛c lb., on the strength of this continued interest.

TALLOW

Tallow, which featured the oil and fat market last month by making substantial advances from an unusually low starting point, continued on the up grade this month and registered a further gain of ⅜c lb. Quotations now stand at 3⅝c to 3¾c lb. for city extra tallow, and 3⅜c to 3½c lb. for special tallow. Offers from producers are stated to be light. While the market continues fairly firm, buyers have not shown so much interest since the latest price advance.

—o—

The Brown Linseed Corporation, manufacturer and refiner of linseed oil, is installing in its mill at Port Richmond, Staten Island, a diesel engine power plant capable of furnishing 675 diesel horsepower.

This improvement, the company says, is expressive of its confidence and in line with its continuous efforts to progress and to be prepared to meet any requirements of consumers of linseed oil. Since its organization in August, 1928, the company has extended its land holdings on the Kill Van Kull and has increased its productive capacity until it now has twenty-four presses. Its refining facilities have also been expanded.

The company has just declared its fifth consecutive quarterly dividend of 25 cents on the common stock and an extra dividend of 12½ cents. The regular quarterly dividend of $1.75 on the preferred stock has also been declared.

—o—

The Louisville plant of the Buckeye Cotton Oil Company, division of the Procter & Gamble Company, which ran on soybean oils last spring and in the early Summer, has resumed operations on beans. It has received some 2,500 tons and has almost as much more ordered. Indications are that the plant will operate on beans until midwinter, when it will probably go back to cottonseed.

—o—

Stocks of crude cottonseed oil on hand in United States October 31, 1931, totaled 115,978,927 lbs., as against 111,631,523 lbs. on the same day of last year. Stocks of refined oil on October 31, 1931, were 231,078,953, as against 254,762,491 lbs., October 31, 1930.

..ALWAYS

WHENEVER your order reads "Standard" Grade Silicate of Soda . . you can be *sure* your shipment will be exactly the same as the last.

A *made-to-measure* product for the Soap industry . . with *Clarity* its outstanding feature. You cannot improve on Standard Quality.

• "Standard" Silicate • is supplied uniformly to specification •

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Standard Silicate Company

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is a guaranty of purity in

PARA"

IT is a manufacturing axiom that Deodorants, Disinfectants and Insecticides are only as good as their base. Niagara Para gives the assurance of dependable strength.

Niagara Para is an always pure product. It should be used to give your production the superiority that wins trade and consumer preference.

Investigate the advantages of Niagara Para, supplied in Quality Crystals.

Quotations gladly given upon request

NIAGARA ALKALI COMPANY

Associated with Electro Bleaching Gas Co.
Pioneer Manufacturer of Liquid Chlorine

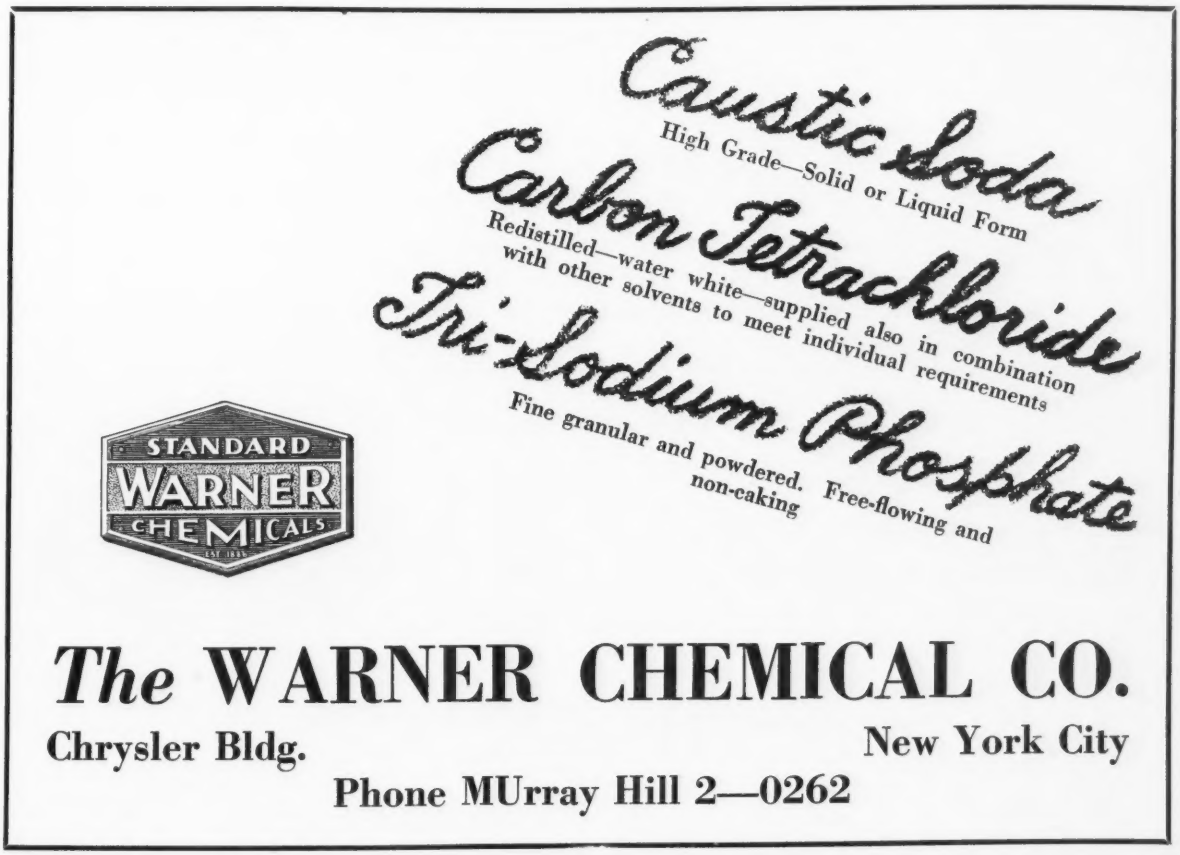
9 East 41st Street, New York, N. Y.

Say you saw it in SOAP!

CURRENT PRICE QUOTATIONS

Chemicals

Acetone, C. P., drums.....lb.	.10	.11
Acid, Boric, bbls., 99½%.....ton	135.00	162.50
Cresylic, 97% dk., drums.....gal.	.47	.48
97-99%, pale, drums.....gal.	.54	.58
Formic, 90%, tech.....lb.	.10½	.12
Oxalic, bbls.....lb.	.11	.11¼
Adeps Lanae, hydrous, bbls.....lb.	.14	.15
Anhydrous, bbls.....lb.	.15	.16
Alcohol, Ethyl, U. S. P., bbls.....gal.	2.42	2.56
Complete Denat., No. 5, drums., ex. gal.	.28	.35
Alum. potash lump.....lb.	.03	.03¼
Ammonia Water, 26°, drums, wks...lb.	.02¾	.03
Ammonium Carbonate, tech., bbls...lb.	.10½	.11½
Bleaching Powder, drums .....100 lb.	1.75	2.35
Borax, pd., cryst., bbls., kegs.....ton	66.00	77.50
Carbon Tetrachloride, car lots.....lb.	—	.06¼
L. C. L.....lb.	.06½	.07
Caustic, see Soda Caustic, Potash Caustic		
China Clay, filler.....ton	10.00	25.00
Cresol, U. S. P., drums .....lb.	.10½	.11
Creosote Oil tanks .....gal.	.11½	.12½
Formaldehyde, bbls. .....lb.	.06	.07
Fullers Earth.....ton	15.00	24.00
Glycerine, C. P., drums .....lb.	.11¼	.11¾
Dynamite, drums .....lb.	.09	.09½
Saponification, tanks .....lb.	.06	.06½
Soaps, Lye, tanks .....lb.	.05	.05½
Hexalin, drums .....lb.	—	.40
Kieselguhr, bags .....ton	—	35.00
Lanolin, see Adeps Lanae.		
Lime, live, bbls.....per bbl.	1.70	2.20
Mercury Bichloride, kegs .....lb.	1.09	1.24
Naphthalene, ref. flakes, bbls.....lb.	.03¾	.05
Nitrobenzene (Myrbane) drums....lb.	.09½	.11
Paradichlorbenzene, bbls., kegs.....lb.	.15	.23
Paraformaldehyde, kegs .....lb.	.38	.39
Petrolatum, bbls. (as to color).....lb.	.02	.08
Phenol, (Carbolic Acid), drums....lb.	.14¼	.16
Pine Oil, bbls. .....gal.	.61	.66
Potash, Caustic, drums.....lb.	.06⅛	.06⅜
Flake .....lb.	.07	.08
Potassium Bichromate, casks .....lb.	.08¾	.09¼
Pumice Stone, powd.....100 lb.	2.50	4.00
Rosins (600 lb. bbls. gross for net)—		
Grade B to H, basis 280 lbs. ....bbl.	3.90	4.15
Grade K to N .....bbl.	4.20	5.95
Grade WG and WW .....bbl.	7.20	7.60
Wood .....bbls.	4.00	4.20
Rotten Stone, pwd. bbls.....lb.	.02½	.04½
Silica, Ref., floated.....ton	18.00	22.00
Soap, Mottled 40 lb. box.....lb.	—	.12
Olive Castile, bars, powder.....lb.	.12	.22
Powdered White, U. S. P.....lb.	.14	.16
Green, U. S. P.....lb.	.06½	.07½
Tallow Chips .....lb.	.07½	.08
Whale Oil, bbls.....lb.	.04	.04½



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Chrysler Bldg. **New York City**

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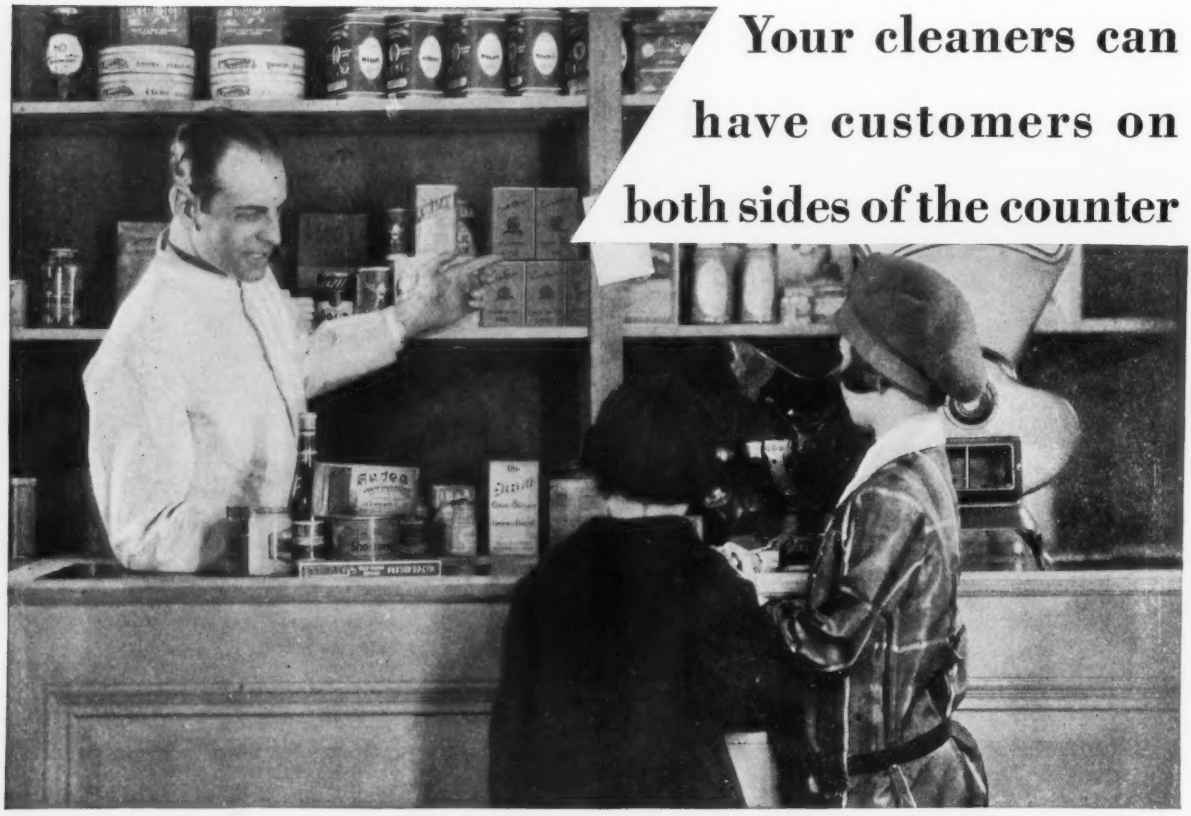

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SPARKLING, free-flowing cleaners get immediate backing from retailers. Such cleaners accelerate first sales and increase resales. All the profit possibilities of a ready seller are included in cleaners and water softeners that use Aero Brand T-S-P.

Aero Brand fines and crystals are carefully cured and accurately screened. Moisture absorption is at the minimum and lumping is largely eliminated.

Packed in paper-lined, non-sifting containers, Aero Brand T-S-P reaches you in excellent condition. Prompt shipments can be made due to the location of our plant at Warners, New Jersey on New York Harbor. Ask for quotations for deliveries by water, rail or truck.

T.S.P.

Industrial Chemicals Division

American Cyanamid Company

535 Fifth Avenue New York

Say you saw it in SOAP!

Soda Ash, contract, wks., bags, bbls.	100 lb.	$1.12½	$1.38
Car lots		—	1.00
Soda Caustic, Cont., wks., sld.	100 lb.	—	2.50
Flake	lb.	—	2.90
Liquid, tanks	lb.	—	2.15
Soda Sal., bbls.	100 lb.	1.00	1.15
Sodium Chloride (Salt)	ton	11.40	14.00
Sodium Fluoride, bbls.	lb.	.07½	.08½
Sodium Hydrosulphite, bbls.	lb.	.22	.26
Sodium Silicate, 40 deg., drum, 100 lb.		.75	.80
Drums, 60 deg. wks.	100 lb.	—	1.65
In tanks, 15c. less per hundred, wks.			
Tar Acid Oils, 15-25%	gal.	.24	.28
Trisodium phosphate, bbls.	lb.	.03	.03½
Zinc Oxide, lead free	lb.	.06½	.07
Zinc Stearate, bbls.	lb.	.18	.21

Oils—Fats—Greases

Castor, No. 1, bbls.	lb.	.11¼	.11½
No. 3, bbls.	lb.	.10¾	.11
Coconut, tanks, N. Y.	lb.	.03¾	.03⅞
Tanks, Pacific Coast	lb.	.03⅜	.03½
Tanks, Chicago	lb.	.04	.04⅛
Cod, Newfoundland, bbls.	gal.	.38	Nom.
Copra, bulk, Coast	lb.	—	.0210
Corn, tanks, mills	lb.	.03⅞	.04
Bbls., N. Y.	lb.	.05¾	.06
Cottonseed, crude, tanks, mill	lb.	.03⅜	.03½
PSY	lb.	.04¼	.04½
Degras, Amer., bbls.	lb.	.03¼	.04
English, bbls.	lb.	.04¼	.04½
German, bbls.	lb.	.03½	.03¾
Neutral, bbls.	lb.	.06¾	.08½
Greases, choice white, bbls., N. Y.	lb.	.03¼	.04½
Yellow	lb.	.03⅛	.03¼
House	lb.	.03⅛	.03¼
Lard, prime, steam, tierces	lb.	.06¼	.06½
Compound tierces	lb.	—	.07¼
Lard Oil,			
Extra, bbls.	lb.	—	.08¼
Extra, No. 1, bbls.	lb.	—	.08
No. 2, bbls.	lb.	—	.07½
Linseed, raw, bbls., spot	lb.	.0740	.0780
Tanks, raw	lb.	—	.0680
Boiled, 5 bbls. lots	lb.	—	0.860
Menhaden, Crude, tanks, Balt.	gal.	.20	Nom.
Oleo Oil, No. 1, bbls., N. Y.	lb.	—	.07⅝
No. 2, bbls., N. Y.	lb.	—	.07⅛
Olive, denatured, bbls., N. Y.	gal.	.65	.68
Foots, bbls. N. Y.	lb.	.04¾	.04⅞
Palm, Lagos, casks, spot	lb.	.04⅜	.04½
Shipments	lb.	—	.04
Niger casks, spot	lb.	0.3¾	.03⅞
Shipments	lb.	—	.03½
Palm Kernel, casks, denatured	lb.	.05¼	.05½
Tank cars, denatured	lb.	—	.04¾
Peanut, domestic tanks, N. Y.	lb.	.04⅜	.04⅝
Red Oil, distilled, bbls.	lb.	.07⅜	.07⅞
Saponified, bbls.	lb.	.07⅜	.07⅞
Tanks	lb.	—	.06½
Soya Bean, domestic tanks, N. Y.	lb.	.04	.04½
Manchurian, Coast, tanks	lb.	.06	Nom.
Stearic Acid			
Double pressed	lb.	.08	.08½
Triple pressed, bgs.	lb.	.11	.11½
Stearine, oleo, bbls.	lb.	.06	.06⅜
Tallow, special, f. o. b. plant	lb.	.03⅜	.03½
City, ex. loose, f. o. b. plant	lb.	.03⅝	.03¾
Tallow, oils, acidless, tanks, N. Y.	lb.	—	.06½
Bbls., c/1, N. Y.	lb.	.07	.07¼
Whale, nat. winter, bbls., N. Y.	gal.	.53	.55
Blchd., winter, bbls., N. Y.	gal.	.56	.58
Extra blchd., bbls., N. Y.	gal.	.59	.61

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STAUFFER BRAND

Caustic Soda

"STAUFFER BRAND" Caustic Soda can be supplied either solid or liquid, in drums or tank cars. It is uniform, pure and worth while using in your soap products. Send your next Caustic Soda inquiry to us.

also makers of Carbon Tetrachloride *for cleaners*

STAUFFER CHEMICAL COMPANY

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Office
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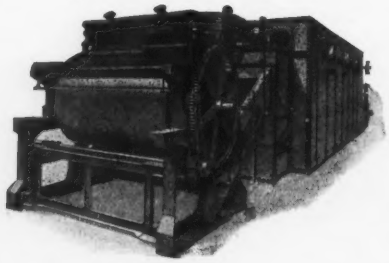

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This new Proctor Dryer produces Soap Chips of transparent thinness—exactly the kind now in popular demand for package laundry soap—also the chip that can be produced most efficiently in making cake toilet soap.

New throughout—new chilling rolls—new dryer, this machine not only produces the most satisfactory soap chip, but it excels in high capacity, saving of floor space, reduced steam consumption, low cost of operation. Write.

PROCTOR & SCHWARTZ, Inc.
PHILADELPHIA

S-348 Blue Green G. C.
S-310 Chloro Green
S-315 Light Olive Green
S-341 Palm & Olive Green
S-343 Emerald Green P.O.
S-365 Lettuce Green
S-355 Rhodamine B Ex. (500% color)
S-323 Pink R.
S-278 Shell Pink
S-351 Pink Y
S-350 Rose
S-363 Scarlet
S-364 Red for Carbolic soaps
S-300 Uranine A (Fluorescene)
S-370 Chloro Opal
S-316 Lemon Yellow
S-318 Golden Yellow
S-319 Canary Yellow
S-320 Orange
S-271 Amber
S-339 Amber B. B.
S-342 Black
S-524 Blue (Ultramarine shade)
S-347 Royal Blue
S-333 Violet
S-255 Lilac
S-256 Heliotrope

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We recommend them for COLD PROCESS, HALF-BOILED, BOILED SOAPS, POTASH SOAPS and SOAP BASES.

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Manufacturing Chemists—Importers—Exporters
53 PARK PLACE NEW YORK, N. Y.

Essential Oils

Almond, Bitter, U. S. P.	lb.	2.25	2.50
Bitter, F. F. P. A.	lb.	2.65	2.80
Sweet, cans	lb.	.45	.47
Apricot, Kernel, cans	lb.	.26	.28
Anise, cans	lb.	—	—
U. S. P., cans	lb.	.40	.41
Bay, tins		1.90	2.00
Bergamot, coppers	lb.	1.95	2.15
Artificial	lb.	1.35	1.50
Birch Tar, rect., bot.	lb.	.45	.50
Crude, tins	lb.	.13	.14
Bois de Rose, Brazilian	lb.	.60	.65
Cayenne	lb.	1.15	1.30
Cade, cans	lb.	.26	.27
Cajuput, native, tins	lb.	.60	.65
Calamus, bot.	lb.	2.75	3.00
Camphor, Sassy, drums	lb.	.21	.23
White, drums	lb.	.16	.18
Cananga, native, tins	lb.	1.75	1.90
Rectified, tins	lb.	2.20	2.30
Caraway Seed	lb.	1.55	1.65
Cassia, Redistilled, U. S. P., cans	lb.	.97	1.10
Cedar Leaf, tins	lb.	.87	1.00
Cedar Wood, light, drums	lb.	.35	.41
Citronella, Java, drums	lb.	.52	.53
Citronella, Ceylon, drums	lb.	.36	.38
Cloves, U. S. P., cans	lb.	1.15	1.20
Eucalyptus, Austl., U. S. P., cans	lb.	.33	.35
Fennel, U. S. P., tins	lb.	1.00	1.10
Geranium, African, cans	lb.	4.00	4.50
Bourbon, tins	lb.	3.70	4.50
Hemlock, tins	lb.	.90	.95
Lavender, U. S. P., tins	lb.	1.95	3.50
Spike, Spanish, cans	lb.	.55	.75
Lemon, Ital., U. S. P.		.90	1.20
Lemongrass, native, cans	lb.	.44	.45
Linaloe, Mex., cases	lb.	1.80	1.95
Neroli, Artificial	lb.	10.00	20.00
Nutmeg, U. S. P., tins	lb.	1.20	1.30
Orange, Sweet, W. Ind., tins	lb.	1.75	1.90
Italian cop.	lb.	1.85	2.30
Distilled	lb.	.80	.90
Origanum, cans, tech.	lb.	.25	.40
Patchouli	lb.	3.75	5.50
Pennyroyal, dom.	lb.	1.55	1.60
Imported	lb.	1.10	1.15
Peppermint, nat. cases	lb.	1.50	1.70
Redis., U. S. P., cases	lb.	1.65	1.90
Petit Grain, S. A., tins	lb.	1.10	1.20
Pine Needle, Siberian	lb.	.60	.63
Rose, Natural	oz.	8.50	14.00
Artificial	oz.	2.00	2.75
Rosemary, U. S. P., drums	lb.	.40	.45
Tech., lb. tins	lb.	.33	.35
Sandalwood, E. Ind., U. S. P.	lb.	6.50	8.00
Sassafras, U. S. P.	lb.	1.00	1.20
Artificial	lb.	.27	.29
Spearmint, U. S. P.	lb.	1.40	1.55
Thyme, red, U. S. P.	lb.	.50	.65
White, U. S. P.	lb.	.85	.90
Vetivert, Bourbon	lb.	4.50	5.00
Java	lb.	16.00	20.00
Ylang Ylang, Bourbon	lb.	5.15	6.50

ESSENTIAL OILS
AROMATIC CHEMICALS

CASSIE S. N.
A powerful and tenacious oil of particular interest to soapmakers: remarkably effective for violet odors and bouquet types.

OAK MOSS RESIN
An outstanding raw material for the perfuming of soaps.

FLOSAL
The original Amyl Cinnamic Aldehyde.

LAVENDER OIL
Extremely low prices, finest qualities.

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A RELIABLE, dependable source of supply contributes to the stability of business. Steer a true course with Quartz Quality Silicates.

Soap makers for generations have specified "N" Brand Silicate in their formulae. It has been the standard for the industry since the time silicate was introduced to American soap makers by this company.

Eight plants serve the soap industry, located in:

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PHILADELPHIA QUARTZ COMPANY

General Offices and Laboratory

121 S. THIRD STREET, PHILADELPHIA

Chicago Office: 205 W. Wacker Drive

Established 1898

SAVOFLEURS

A powerful, inexpensive perfume material for Liquid Soaps, etc., which will impart a fresh, flowery and lasting odor to your product. One pound will perfume fifty gallons or more of Liquid Soap. Price, $2.50 per pound. Quantity price on application.

EVERGREEN CHEMICAL CO., INC.

160 FIFTH AVENUE NEW YORK

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Aromatic Chemicals

Acetophenone, C. P.	lb.	$2.50	$3.00
Amyl Cinnamic Aldehyde	lb.	3.50	4.25
Anethol	lb.	1.20	1.40
Benzaldehyde, tech.	lb.	.60	.65
U. S. P.	lb.	1.20	1.35
Benzyl, Acetate	lb.	.75	1.10
Alcohol	lb.	1.00	1.40
Citral	lb.	2.10	2.40
Citronellal	lb.	1.75	2.50
Citronellol	lb.	2.50	3.50
Citronellyl Acetate	lb.	4.50	7.00
Coumarin	lb.	3.60	4.00
Diphenyl oxide	lb.	1.15	1.25
Eucalyptol, U. S. P.	lb.	.75	.80
Eugenol, U. S. P.	lb.	3.00	4.00
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Imported	lb.	2.00	3.25
Geranyl Acetate	lb.	2.50	4.00
Heliotropin, dom.	lb.	2.00	2.50
Imported	lb.	2.50	4.00
Hydroxycitronellal	lb.	3.50	9.00
Indol, C. P.	oz.	2.50	5.00
Ionone	lb.	4.00	6.50
Iso-Eugenol	lb.	4.00	5.00
Linalool	lb.	1.95	3.25
Linalyl Acetate	lb.	2.50	3.25
Menthol	lb.	3.35	3.50
Methyl Acetophenone	lb.	2.50	3.00
Anthranilate	lb.	2.20	2.60
Paracresol	lb.	4.50	6.00
Salicylate, U. S. P.	lb.	.40	.45
Musk Ambrette	lb.	6.75	7.25
Ketone	lb.	6.00	7.50
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Phenylacetaldehyde	lb.	$5.00	$7.50
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Phenylethyl Alcohol, 1 lb. bot.	lb.	4.25	4.50
Rhodinol	lb.	6.00	9.50
Safrol	lb.	.29	.31
Terpineol, C. P., 1,000 lb. drs.	lb.	.28	.30
Cans	lb.	.33	.34
Terpinyl Acetate, 25 lb. cans	lb.	.80	.95
Thymol, U. S. P.	lb.	1.50	1.75
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Yara Yara	lb.	1.60	3.00
Insect powder, bbls.	lb.	.21	.23
Concentrated Extract	gal.	1.50	1.70
Gums—			
Arabic, Amb. Sts.	lb.	.07½	.08
White, powdered	lb.	.15	.17
Karaya, powdered	lb.	.19	.20
Tragacanth, Aleppo, No. 1	lb.	1.25	1.30
Sorts	lb.	.25	.50
Turkish, No. 1	lb.	.80	.85
Waxes—			
Bayberry, bgs.	lb.	.16	.20
Bees, white	lb.	.34	.38
African, bgs.	lb.	.19	.20
Refined, yel.	lb.	.25	.30
Candelilla, bgs.	lb.	.14	.15
Carnauba, No. 1	lb.	.32	Nom.
No. 2, Yel.	lb.	—	Nom.
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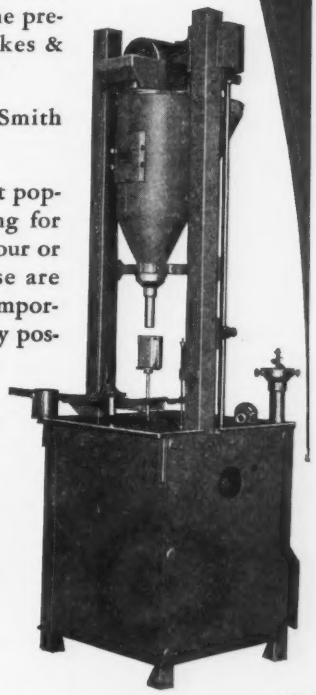

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Report on Liquid Soap

(*From Page* 132)

hold another meeting does not necessarily prove a lack of interest of liquid soap makers in organizing to solve common problems, as each and every manufacturer at the mid-west meeting admitted that he had a great number of problems before him that could be solved by cooperative effort.

Following the original February meeting, the Insecticide and Disinfectant Manufacturers Association, through the cooperation of its Secretary, devoted a special portion of their semi-annual convention program, in June at Chicago, to the liquid soap problem but more particularly to the advisement of forming a liquid soap group within the aforementioned Association, and the Secretary especially invited all liquid soap manufacturers to attend that portion of the Convention program dedicated to the liquid soap industry. The lack of interest on the part of liquid soap manufacturers was further made apparent by virtue of their failure to attend the liquid soap program of this Convention in spite of the fact that the various liquid soap manufacturers during the past few years have been ever so solicitous in forming an Association.

There can be no question but that the manufacturers of the liquid soap industry in general are interested in an association whereby they can thresh out their problems to the mutual benefit of the manufacturers and the consuming public and I am sure that the same gentlemen who comprise the roster of liquid soap manufacturers will soon realize their obligation to their companies, the public and themselves, will cooperate in a greater measure in the immediate future in the organization of their industry.

The necessity of having an Association, or at least a group within the Insecticide and Disinfectant Manufacturers Association devoted to liquid soap problems, is apparent. There is a trend amongst the manufacturers to bring their problems before the Insecticide and Disinfectant Manufacturers Association with the intention of strengthening the liquid soap program as a part of the annual and semi-annual convention of the present Association.

Our problems, as mentioned by the Liquid Soap Committee in their report at the June Convention, consisted most outstandingly as those of price-cutting, uniform discount and jobbing quantity, uniform commissions to salesmen, commercial bribery, tariff on coconut oil and uniform manufacturing cost.

No one thing has done so much to bring an end to those problems, as above listed, than the present depression which has had a most noticeable effect in the liquid soap industry only in the last six months. The increased competition accompanied by a general slump in the industry had of course brought about a good deal of price-cutting, but in my estimation the cuts in price have never brought the cost of liquid soap to the consumer any more or less than the actual worth of liquid soap.

In the hysteria of high prices, liquid soap was selling for from two to ten times its actual value and price-cutting has done more to bring the cost to the consumer down to where it belongs than any other single movement. In the adjustment of prices, uniform discounts and uniform commissions are gradually falling in line to where they belong, this also being forced by virtue of conditions. As regards commercial bribery, this is still prevalent but in view of the activity of the Federal Trade Commission, and through the cooperation of the manufacturers themselves, this evil is nowhere near as promiscuous as it was.

THE standardization of the cost of crude materials by the sellers and brokers has done a great deal towards giving the manufacturer an opportunity of standardizing on his manufacturing ratios of cost, with the natural result that uniform manufacturing costs have been made possible.

Concerning the tariff on coconut oil, this has been a major issue in Congress during the last session and promises to be a leading issue when this body next convenes. No manufacturer, or group of manufacturers, can boast of their activity as individuals or groups if they have not affiliated themselves with the Bureau of Raw Materials, which organization under the patient, skillful and intelligent direction of John B. Gordon which has been solely instrumental in protecting the interests of manufacturers of liquid soaps and other soap products in the United States by defending these manufacturers so far successfully against a tariff on soap making oils and fats and particularly coconut oil from the Philippine Islands. Any soap maker who does not belong to the Bureau of Raw Materials, which is organized for the protection of his business, and who knows of this Bureau and is not rendering it his moral and financial support is standing in his own light.

In closing, let me say that I believe that through the cooperation of the manufacturers as individuals, more progress will be made in making ours a more satisfactory, more legitimate, more stable and more profitable industry. While there has been a gross lack of cooperation amongst the liquid soap manufacturers in the past, at the same time I do believe that more advancement towards cooperation as a body, has been made in spite of the lack of full cooperation, than in any previous single unit of time since the beginning of the popularity of liquid soap.

V. W. MIDER, Chairman,
JOHN V. HALASKA,
RUSSELL H. YOUNG.

—o—

Report of Membership Committee

By JOHN POWELL
John Powell & Company

YOUR Committee has continued to function as energetically as heretofore with the result that, although we have had a number of resignations since our last annual meeting, our membership list now totals 104. During the past year we have lost ten members, some of which were discussed at our last meeting, but we have added twelve new members since that time, which more than balances the loss. It is interesting to observe that there is an increasing amount of interest in our Association, as evidenced by the number of new members added and by comments made to your Chairman.

There is now before our Board of Governors a plan whereby our Membership would be greatly increased, but the advisability of the plan must be carefully studied by our officers before it can be acted upon. Since the main function of the Membership Committee is to secure members, this report is wholly concerned with our progress in that direction. Your chairman wishes, at this time, to extend his sincere thanks to those of our members who have cooperated in securing new members, and hopes that they will continue the good work.

The annual banquet was held in one of the *New Yorker* ballrooms the evening of December 8th, and was attended by about 125 persons. An elaborate floor show was put on following the dinner. A handsome golf wrist watch was presented to Dr. White, retiring president, at the banquet in appreciation of his work during the past two years.

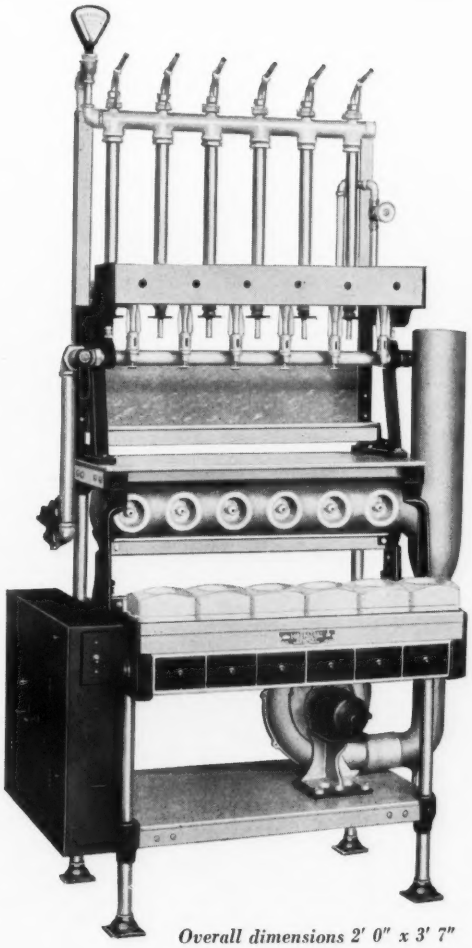
—o—

The annual report on essential oils, synthetic perfumes, etc., for the year, 1930, has just been published by Schimmel & Co., Miltitz bei Leipzig, Germany. Copies are being distributed in the United States by Fritzsche Bros., Inc., sole agents. A major portion of the report is devoted to commercial notes and scientific reports concerning volatile oils. Another section presents notes on scientific research.

Oil & Fat Section

A Section of SOAP devoted to the Technology and Chemistry of Oils, Fats, Waxes, Soaps, Glycerine, Etc.

Volume VII, No. 12 December, 1931



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Oil & Fat Section

The Circulating Rendering Process

Describing a Revolutionary Development in the Modern Art of Fat Rendering From Edible And Inedible Materials

By OSCAR H. WURSTER[1]

President, Wurster & Sanger, Inc., Chicago, Ill.

IT IS the purpose of this paper to describe the Circulating Rendering Process[2] invented by Mr. T. K. Lowry, General Superintendent of Darling & Company, Chicago, Illinois, and developed at the Chicago Plant of Darling & Company.

Definition of Rendering

In a broad sense the term rendering is applied to the combined operations carried out in rendering plants by the rendering industry.[3] In its more limited and specific meaning rendering "is the term applied to the trying out of animal fats, whether edible or inedible; that is, to the separation, by means of heat, of fat from tissue and cellular structure. In the trade a further distinction is sometimes made, extraction at high temperatures being called 'rendering,' and extraction at low temperatures, 'melting.' "[4] Rendering is also described as the extraction of oil by boiling out with water and as consisting of the process which involves heating of the tissues containing the oils or fats so that the cell membranes burst and the liquid fat flows out.

I emphasize the definition and meaning of rendering because in conceiving and developing the new Circulating Rendering Process the questions which naturally came first were (1) What does rendering consist of, basically? (2) How are the basic requirements fulfilled by the old methods? (3) How can these basic requirements be accomplished more efficiently and economically, more in line with our present ideas of the proper conduct of process operations and in the light of our present engineering knowledge and experience?

Former Methods of Rendering

RENDERING in the past has been carried out by three general processes known as kettle, wet, and dry rendering. Kettle rendering is carried out by heating the material in an open kettle with direct heat or with steam heat in a jacketed kettle, and with hand or mechanical agitation. Usually some water is added to prevent local overheating or scorching at the start of the operation.

Wet rendering, also termed steam and pressure rendering, is carried out in a closed tank. The material is charged into the tank or digester and is then subjected to a steam pressure of about 40 pounds, with open steam. These digesters, in general, do not have mechanical agitation, but one modification which provides for subsequent drying in the same vessel is so equipped. By this process considerable water is introduced and its final disposition must be provided for in subsequent operations.

[1] Presented at the Fifth Fall Meeting of The American Oil Chemists' Society, Chicago, Ill., October 29, 1931.
[2] Patents applied for in the United States and foreign countries.
[3] Cf. L. B. Zapoleon, "Inedible Animal Fats In The United States" p. 175; Fats and Oils Studies of the Food Research Institute, No. 3, Stanford University, California, December, 1929.
[4] Ibid. p. 77.

Dry rendering is carried out in a closed, horizontal or vertical dry-cooker or dry-melter, either at atmospheric pressure or under pressure or vacuum, or with a combination of these conditions. The heating steam in the jacket is usually at 40 to 50 pounds gauge pressure. The cooker is provided with a heavy mechanical agitator to keep the heating surface clean, to facilitate the heat transfer and to prevent local overheating and scorching of the material. A priming charge of fat may be added to the charge of material before the heat is turned on.

In all rendering processes the fatty matter is preferably cut up into small pieces before being charged to the rendering vessel. This facilitates uniformity in the heating and cooking of the material and the consequent breaking of the fat cells and, also, the exudation of the fat from the solid material.

Objections to the Old Rendering Processes

OPEN kettle rendering is, of course, slow owing to the relatively small heating surface and consequent slow rate of heat transfer. When carried out in a direct-fire-heated kettle the process is wasteful of fuel and the fat has a scorched taste, is dark colored and is of variable quality. Rendering in open, steam jacketed kettles, conserves fuel, permits better heat control, and produces a more uniform product. The operation is, however, a slow one, does not entirely prevent scorching, and introduces complications such as increased F.F.A. due to the time element. It does not adapt itself to economical large scale production.

Since open kettle rendering is slow and not suitable for materials low in fat content because the recovery of fat is incomplete, there was developed the wet rendering process in which the fatty material is disintegrated by the direct application of steam under pressure. Most lard, prime steam lard, is today produced by this process.

The objections to wet rendering are the temperature required, usually that of steam at 40 pounds pressure, the time required, which is usually 7 to 10 hours, the production of tank water and necessary recovery of the nitrogen values therefrom, and the consequent complications of the process involved in recovering the fat, tankage and nitrogen content of the tank water.

With the above enumerated objections to open kettle and wet pressure rendering, the open kettle process was developed into what is now known as the dry rendering process. The comminuted mass is heated with agitation and melted in its own fat and moisture. As carried out, the process is a necessary compromise between the greatest possible economy of operation and a satisfactory product. The heating surface is relatively small, therefore the heat transfer is slow. The maximum steam pressure permissible in the jacket is 40 to 50 pounds. Even this temperature affects the color of the fat and there is scorching of the products. There is also formation of gluey or mucilaginous materials at the temperature and under the conditions of the dry rendering process. The process requires from 3 to 10 hours, depending on the material and the size of the melter. The power required for the heavy agitator which turns over the mass and rubs it against the shell is high and the upkeep of cookers is high due to wear and tear of the agitator and internal friction of the material on the shell.

Origin of the Circulating Rendering Process

With the merits and disadvantages of the above three rendering processes in mind, Mr. Lowry concluded that what was needed was a process which combined (1) quick heating, to reduce the time element and its effect upon color and F.F.A., (2) low temperature of the materials, to prevent discoloration and scorching, to keep down the F.F.A. and permit the use of exhaust steam at low pressures, (3) large batches to meet modern manufacturing requirements, (4) economical operation as regards steam, power and labor.

The quick heating and low temperature specifications required a relatively large heating surface with a rapid heat transfer. This indicated a tube heating surface such as has been adopted for boilers, evaporators, stills, and other heating equipment. The rapid heat transfer would need to be accomplished by forced circulation.

Considering the nature of the materials which are rendered and their physical conditions, the possibility of circulating them through heating tubes by pumping raised many questions and problems. It had not been done and there was naturally the question of whether or not it could be carried out practically.

Using low temperatures would permit the use of exhaust steam and effect a great economy of operation. To use a low rendering temperature and exhaust steam for heating would require carrying out the process under vacuum. Just how the materials in process would act in a circulating rendering system carried out under vacuum remained to be determined. There was no experience or data available on the question.

In other words, the problems of pumping the mixed solid and liquid materials, passing these materials through heating tubes, possible froth-

ing of the materials under vacuum as the moisture passed off, and necessary operating conditions could not be solved except by actually building and operating a plant. There was no data or experience available on the exact relation of the temperature and time factors of rendering under different conditions. Assuming that, from calculations, the proper heating surface was provided to give a certain heat transfer in a given time, there was no definite knowledge or data to assure that in this time and at the temperature of operation with a high vacuum the material would be rendered and in proper physical condition for subsequent handling. The characteristics of the materials to be handled and the circulating process involved precluded the possibility of successful experimental or pilot plant operation. However, the possibilities, were considered sufficient to warrant proceeding with a commercial size unit and the design and construction of a plant were started early in 1930.

Description of Process and Equipment

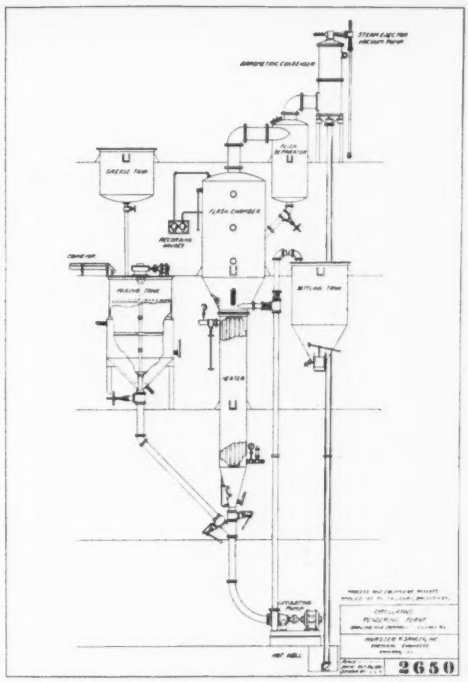
THE Circulating Rendering Plant consists of a tubular heating element with vertical tubes through which the material passes. The tubes are heated by exhaust steam at pressures below 5 pounds gauge. The material is drawn from the bottom of the tubes by a centrifugal pump of the non-clogging impeller type and is discharged at a point immediately above the top of the tubes to maintain circulation at this point and prevent clogging of the tubes. Above the heater is a large flash chamber in which the separation of the vapor from the liquid takes place. The vapor is drawn off from the flash chamber through a separator to a barometric condenser. A 2-stage steam-jet air ejector is connected to the barometric condenser to obtain the vacuum.

The material is ground and conveyed to a steam jacketed mixing and charging tank provided with an agitator in which it is heated before pumping into the heater and flash chamber. Whether or not a priming charge of fat is added depends on the kind of material, its physical condition and the amount of fat and moisture it contains.

After pumping the warmed material into the circulating system it is circulated through the heater until it is rendered and is then discharged into a settling tank. The fat is drawn off from the settling tank and the cracklings or greaves, are run to the presses.

Operation of the First Unit

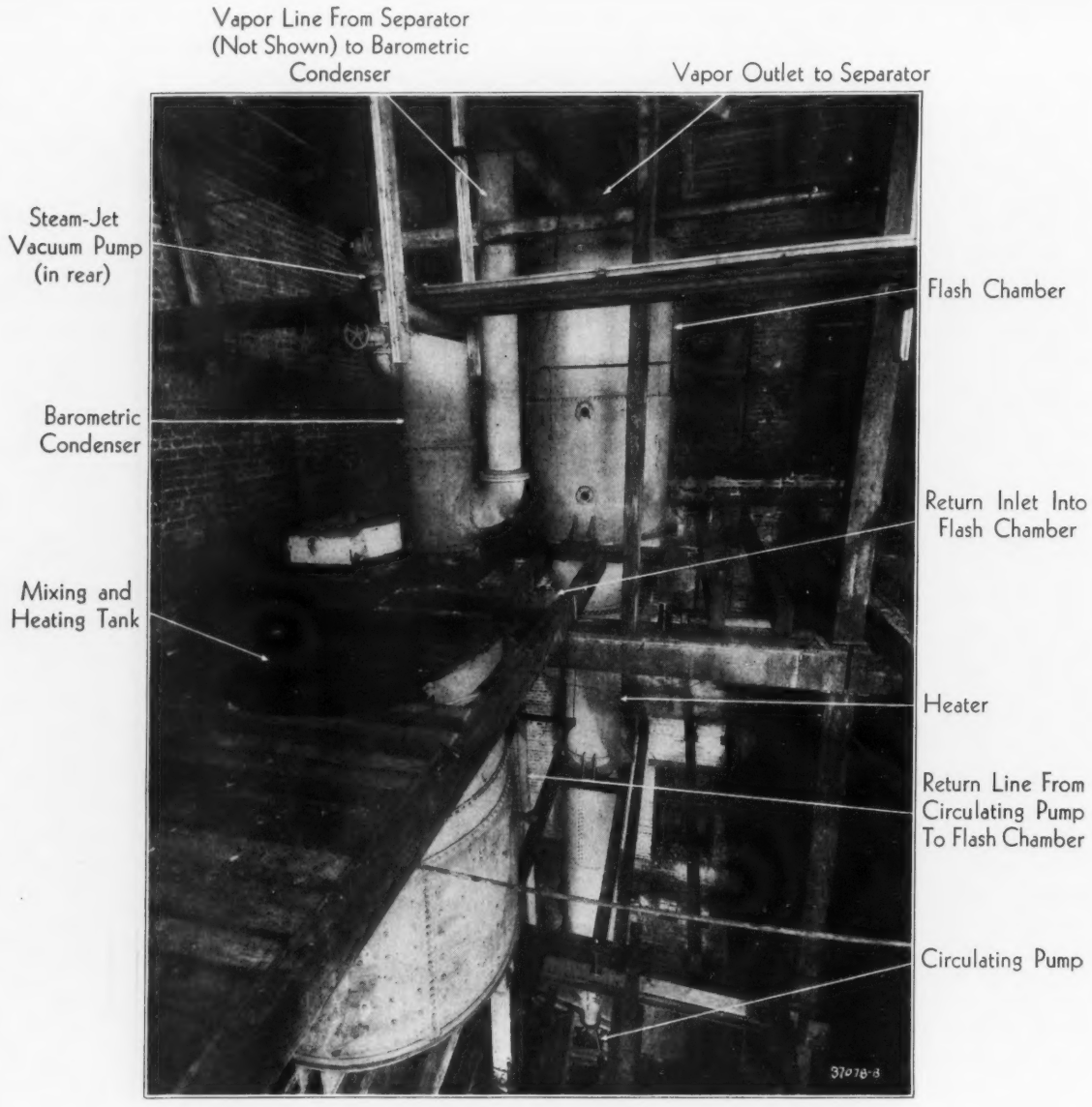
THE first unit built was designed for a total capacity of 20,000 lbs. material per charge, including priming fat. The average charge as the



CIRCULATING RENDERING PLANT (Patents applied for)

plant now is operated is slightly larger. The heater has slightly over 1,000 sq. ft. of heating surface with tubes of 4" outside diameter. Of the anticipated possible difficulties, it is of interest to note that frothing which became a problem with some materials has been overcome. The flash chamber is seven feet in diameter and has ample capacity for the release of the vapors from the liquid. The clogging of tubes has not been serious and has been overcome. The solids are in process of shrinking throughout the cooking operation, and the individual pieces entering the tubes naturally become smaller as they drop through.

Pumping problems developed at once and it was found necessary to reinstall the pump lines so as to overcome certain difficulties and several changes in pump design had to be made. The alterations in the pumps were not related to the proper functioning of the pumps as regards pumping. The non-clogging type impeller centrifugal pump has satisfactorily handled all the solids such as bones and meat and the foreign materials in garbage. The changes in pump design and construction were primarily to strengthen the pumps mechanically for this severe service and to keep them vacuum-tight under this service. The pumps in present use are functioning satisfactorily. Some minor changes in the original design of the equipment were also made as the development work progressed.



Circulating Rendering Plant

The Second Unit During Erection at Darling & Company, Chicago Plant

Results Obtained

ONE unit has now been in operation for over a year at the Chicago Plant of Darling & Company with satisfactory results. A second unit was recently installed at the Chicago Plant and has been in operation for several months. In this unit the heater is provided with tubes of 4½" outside diameter. Two units are now being installed at the Buffalo Plant of Darling & Company.

A charge of material is rendered in about 2 hours. As compared with dry rendering the time varies inversely with the heating surface, with a further reduction due to better heat transfer resulting from rapid circulation. A 5′ x 16′ dry melter has a heating surface of approximately 250 sq. ft. However, the material resting on the lower portion of the shell is at no time in contact with the entire heating surface. The time of rendering a 16,000 lbs. charge is 8 to 9 hours. The Circulating Rendering Process with 1,000 sq. ft. heating surface renders the same size charge in about one-fourth the time, or 2 hours. The use of exhaust steam at 5 lbs. pressure as against 40 to 50 lbs. in dry rendering lowers the heating temperature

(*Turn to Page* 93)

The Effect of Light on the Oxidation of Fats*

Active Oxygen Test, Kreis Test and Schiff Reaction All of Value in Determining Progress of Fat Oxidation

By C. H. LEA

IT has long been known that exposure to light exerts a powerful influence upon the deterioration of fats, and it has even been claimed that light alone, in the absence of air, is capable of producing rancidity (*Wagner, Walker and Oestermann,* 1913). It is now, however, generally admitted that the action of light consists essentially in accelerating oxidation of the fat. To follow the changes induced in fats by exposure to air and light it is necessary (1) to have a quantitative knowledge of the state of oxidation in any specimens of fat; (2) to be able to detect and follow the very earliest stages in the process of oxidation; and (3) to possess the means of comparing the potential keeping qualities of any two or more fats. Since no existing methods satisfy these requirements a new test for rancidity has been devised. (*Lea,* 1929).

A New Test for Rancidity

BRIEFLY, the process consists in heating the oil or fat with a solvent mixture of glacial acetic acid and chloroform in the presence of solid potassium iodide. Oxidation of the reagent or fat during the process is prevented by previously filling the tube with nitrogen, while the steady evolution of chloroform vapor effectively prevents diffusion of oxygen back into the tube. The reaction mixture is cooled, poured into 5 per cent potassium iodide, and titrated with N/500 sodium thiosulphate solution.

The sensitivity of the method is such that using 1 g. of fat a content of active oxygen equivalent to 0.1 cc. of N/500 thiosulphate solution, i.e., 1.6×10^{-6} g., of oxygen can be detected. Owing to loss of iodine by combination with the fat the amount of active oxygen measured is always slightly less than the amount actually present. This point together with experimental details of the method is discussed in full in Appendix I.

In addition to the test for active oxygen outlined above, a modification of the Kreis test has also been used. A determination is carried out as follows. The fat (1 g.) is dissolved in benzene (2 c.c.), concentrated hydrochloric acid (as free 1 c.c.) added and the mixture shaken for one minute. A 0.1 per cent solution of phloroglucinol in ether (1 c.c.) is then added, shaking continued for a further minute, and after separation by means of the centrifuge the pink aqueous layer is compared with a set of permanganate standards. These are prepared in the following manner. Potassium permanganate (0.2 g.) is dissolved in distilled water, acidified with dilute sulphuric acid and made up to a litre (solution No. 5). Five successive dilutions (Nos. 4, 3, 2, 1 and 0) are prepared from this solution diluting 2.5 times at each stage. The standards are renewed as soon as manganese dioxide begins to be deposited. To determine the intensity of the Kreis test, "n" is first estimated by direct comparison with the standards. The intensity is then taken to be $(2.5)^n$. It is probable that this method interprets the eye's estimate of the intensity rather better than does the use of simple arithmetical proportion; the difference between the two sets of figures, however, is usually not great. With pure fats consistent results can be obtained with fair accuracy, but in the presence of appreciable quantities of non-fatty material the test becomes much less satisfactory. It is essential that the ether used in making up the phloroglucinol reagent be free from peroxide, otherwise extremely erratic results may be obtained. Finally the Schiff reaction has been used but in a form somewhat modified in order to make it easier of application to solid fats (see Appendix 2).

Relative Susceptibilities of Fats

THE samples of fat are illuminated under similar conditions and the active oxygen content determined at intervals. In the present work use has been made of a constant temperature room at 25 C., the fat being placed at a distance of 3 feet below the filament of a 100-watt gas-

* From the Proceedings of the Royal Society, B. Vol. 108, Page 175, 1931.

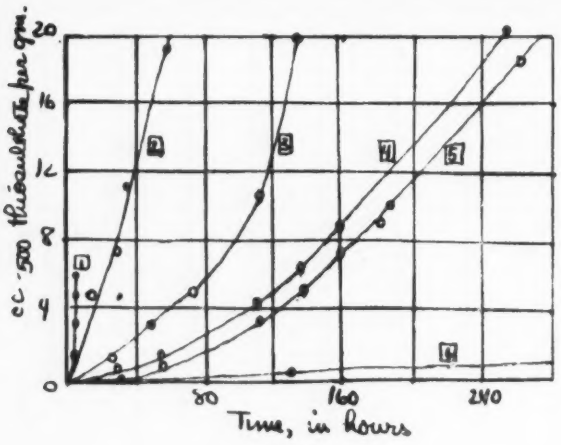


FIG. 1

Effect of illumination intensities on minced beef kidney fat oxidation.

1. Direct sunlight (March) 23°C-20°C.
2. Diffused sunlight north, early March mean 15°C.
3. Dark room, 4 ft. from 100 watt gas-filled lamp temp. 22°-25°C.
4. Dark room, 4 ft. from same lamp 20°-23°C.
5. Dark room, 6 ft. from 100 watt lamp 20°-23°C.
6. Unilluminated fat.

filled lamp (with shade). Small flat-bottomed, crystallizing dishes 5 cm. in diameter, each containing 3.5 or 5 g. of fat, are used. Sixteen dishes may be irradiated by one lamp, e.g., four dishes of each of four samples of fat. A dish is removed at intervals for analysis.* By screening the lamps and by the use of partitions several experiments may be carried out simultaneously in the same room. New lamps of the same batch can usually be relied upon to give fairly uniform results. It is unsatisfactory to replace the lamps by diffused daylight or sunlight, since the stronger illumination, by greatly reducing the induction period, masks the differences in susceptibility between the various specimens.

The order of magnitude of the influence of light from different sources may be gathered from Fig. 1 and Table 1.

*The maximum difference in intensity of the light received by any two dishes is less than 2 per cent., the intensity of illumination being taken as proportional to $1/D^2 \cos\theta$, where D is the distance between the lamp filament and the centre of a dish, and θ the angle of incidence. This error may be minimized by using the dishes farthest from the centre first, while the titration is still low.

In compiling the table use has been made of the approximate temperature coefficient of 1.83 obtained from experiments on cod-liver oil.

Under the influence of strong light it was found that the pronounced induction period observed in the dark and under relatively weak illumination became reduced almost to vanishing point. This was demonstrated as follows: Beef kidney fat*

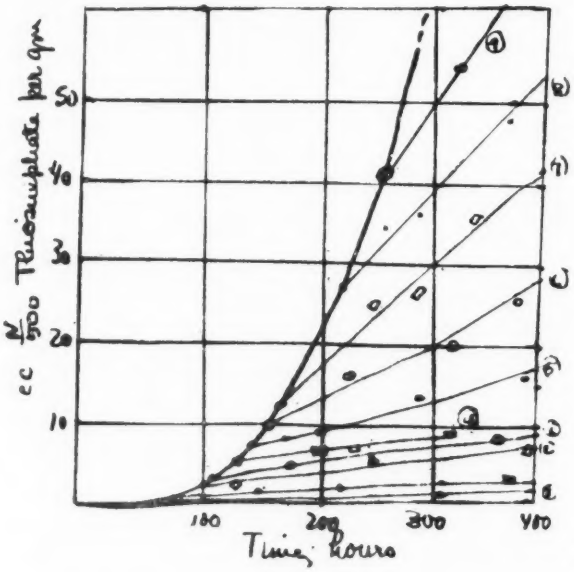


FIG. 2

Effects of various periods of illumination on promoting oxidation of beef kidney fat.

was extracted from the tissue with petroleum ether, powdered, and exposed on glass plates in a room with sky lighting (not direct sunlight) during dull weather in early February. The course of the resulting oxidation is shown in Fig. 5 (iii). Fig. 4 (iii) shows the curves obtained from similarly extracted beef external fat exposed in small flat-bottomed dishes (5 cm. diameter, 5 g. per dish) to a July sky in the same room. The effect of direct summer sunlight was still greater. Specimens of minced beef kidney fats (A and B)

*The expression "beef kidney fat" is used in this paper to denote the perirenal fat, i. e., the mass of adipose tissue surrounding the kidneys.

TABLE I

	Darkness	3 ft. from 100 Watt Lamp	Winter		Summer	
			Skylight Through Glass	Sunlight	Skylight Through Glass	Sunlight
	° C.	° C.	° C.	° C.	° C.	° C.
Temperature	15	15	17	23	25	35
Relative effect	.02-.05	1	28	162	64	470
Reduced to same temperature	.02-.05	1	25	100	35	140

which were exposed to direct sunlight on hot July days—mean temperatures 34 C. and 37 C. respectively—in 6 hours had reached a content of active oxygen corresponding to 50 cc. of N/500 thiosulphate solution per gram.

When the minced or powdered fat was spread on glass plates the temperatures given are those registered by a thermometer with bulb lying in the fat. When the fat was contained in small dishes the thermometer lay on the table beside them. It follows that the temperatures recorded for artificial and diffused daylight will be fairly accurate but for exposure to sunlight they may be inaccurate owing to local heating of the fat.

To obtain a quantitative measure of the relation between rate of oxidation and intensity of the light, a sample of fresh beef kidney fat was minced finely at O° C. and spread in a thin even layer on flat glass plates which were placed at various distances below a 100-watt gas-filled lamp suspended near the ceiling of a dark room. As a control experiment two similar plates were kept in the same room but completely screened from light. Since the fat consisted of small cylinders arranged at random but with the long axes mainly horizontal, the intensity of illumination was taken as approximately proportional to $(1 + \cos \theta) 2/D^2$, where D is the direct distance from the lamp filament, and θ the angle of incidence. Table II gives the active oxygen content (expressed as cubic centimetres N/500 thiosulphate solution per gram of fat) for different light intensities at the end of 260 and 400 hours.

Comparing experiments No. 1 and No. 8 it is apparent that reduction of the light intensity 50 times has only reduced the resultant oxidation by about five times. It follows that even very weak light may exert an appreciable influence on the rate of oxidation of fats.

Autocatalytic Nature of Oxidation

THE form of the curves in Fig. 1 shows that the process is autocatalytic. It therefore seemed of interest to discover what would be the course of the oxidation after removal of the exciting light, when presumably a certain amount of the autocatalyst generated by the action of the light would be present. For this purpose a specimen of minced beef kidney fat was spread on flat glass plates (4 inches square, 12 g. per plate), and exposed in a constant temperature room (25° C.) to the light from a 100-watt gas-filled lamp suspended 3 feet above it. Two lamps were used, each illuminating four plates. At intervals a plate was removed, sampled for analysis, and the residual fat placed in a large light-proof chest in the same room. The results are plotted in Fig. 2, curves 1 to 9 representing the course of the oxidation taking place in the absence of light.

It will be seen that once oxidation has set in, removal of the source of light does not reduce the rate to that of the unexposed fat, but that the reaction proceeds in the absence of light at a

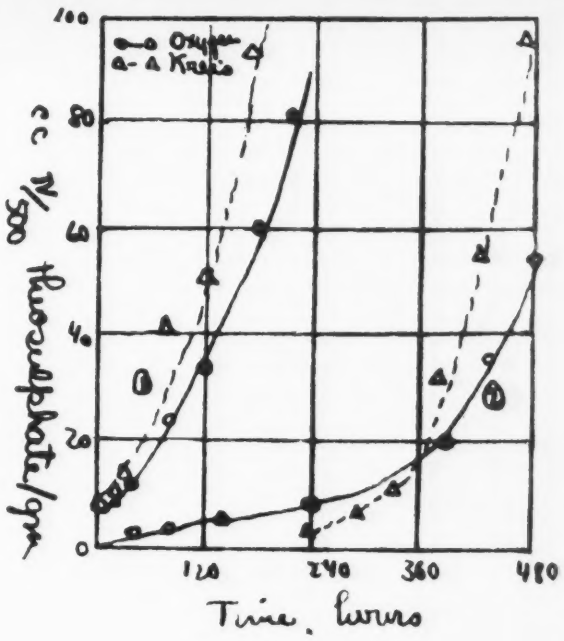
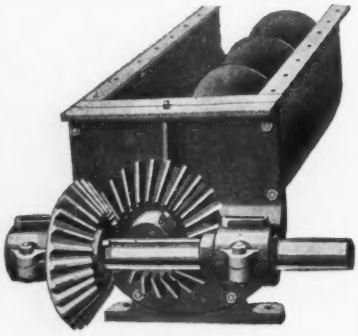


FIG. 3

1. Lard, temp. 27°C. 2. Mutton kidney fat temp. 27.2°C.

TABLE II. The Influence of Light Intensity on the Velocity of Oxidation

Experiment Number	Mean Temperature °C.	Light Intensity	Active Oxygen Content	
			260 Hours	400 Hours
1	20.5	100	5.10	22.68
2	20	53.7	3.30	12.99
3	20	27.6	2.12	6.80
4	20.5	15.2	2.00	7.30
5	19.5	11.3	1.62	5.75
6	19.5	10.5	1.92	6.50
7	18.75	3.4	1.70	5.55
8	18.25	2.0	1.55	4.60
Control	19.5	0	.17	.33



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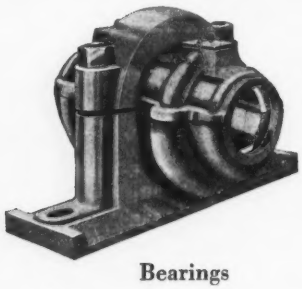

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rate depending upon the amount of active oxygen already present. By plotting the gradients of curves 1 to 9 against the initial contents of active oxygen it is apparent that the catalytic effect produced by quantities of oxygen up to about 6 cc. N/500 thiosulphate per gram is directly proportional to the amount present. Between 6 cc. and 10 cc. the increase in catalytic effect for each cubic centimetre of oxygen added rapidly falls, becoming more or less constant above 10 cc. at a fraction of its former value. The beginning of the approximately linear part of the oxidation curve depends to some extent upon the physical state of the fat. Values of roughly 8 cc. and 15 cc. were obtained respectively for powdered fat (1 g. per 14 sq. cm.) and a flat surface of solid fat 2.25 mm. thick (1 g. per 4 sq. cm.).

It follows from the autocatalytic character of the change that the presence of quantities of active oxygen too small to exert any influence on odors and flavor may yet be very harmful from the point of view of keeping quality. It is therefore probable that the potential storage life of many fatty products is seriously impaired by the methods employed in their manufacture. To quote an instance. A sample of absolutely fresh rendered lard, obtained from a local factory, though sweet to the taste, already gave oxygen and Kreis values of 3.5 c.c. and 3.2 units respectively. The induction period of this fat exposed in flat-bottomed dishes (5 cm. diameter, 5 g. per dish) in a room at 25° C. to the light from a 100-watt lamp at 3 feet distance was extremely short (Fig. 3 (i)). For purpose of comparison the oxidation curves obtained under similar conditions from a more resistant fat (fresh mutton kidney fat) are also shown. The very short induction period possessed by a partly-oxidized fat is again seen in Fig. 6 in the case of cod-liver oil.

Different Susceptibilities to Oxidation

As might perhaps be expected, the readiness with which the fat undergoes oxidation may vary considerably in different animals. This is clearly shown in Fig. 4. Two samples of fresh beef kidney fat from different animals were chopped fine on a glass plate at 5° C., sieved, and the powdered fat spread in a thin uniform layer on glass plates (10 inches by 5 inches, 20 g. per plate). The two plates were placed in a constant temperature room at 25° C. and illuminated simultaneously by the same lamp suspended 3 feet above them. The respective rates of oxidation are plotted in curves (i) and (ii).

Beef kidney fat is a complex containing in addition to the fat proper (circa 96 per cent) smaller quantities of water (circa 3 per cent), connective tissue (dry weight 1 per cent), blood, pigment, sterols, etc. Robinson (1924) has shown that hæmoglobin accelerates the oxidation of drying oils. Moisture is usually said to favor the oxidation, but according to Holm and Greenbank (1924) retards it. It was therefore quite possible that the observed differences in susceptibility of these two fats might be due to variation in composition or amount of the non-fatty constituents, rather than to actual chemical diversity in the fats themselves. The two samples were therefore ground up with anhydrous sodium sulphate and silver sand, and extracted with peroxide-free ether using a hot extraction apparatus in a darkened room. After removal of the solvent under vacuum the fats gave the following analyses:

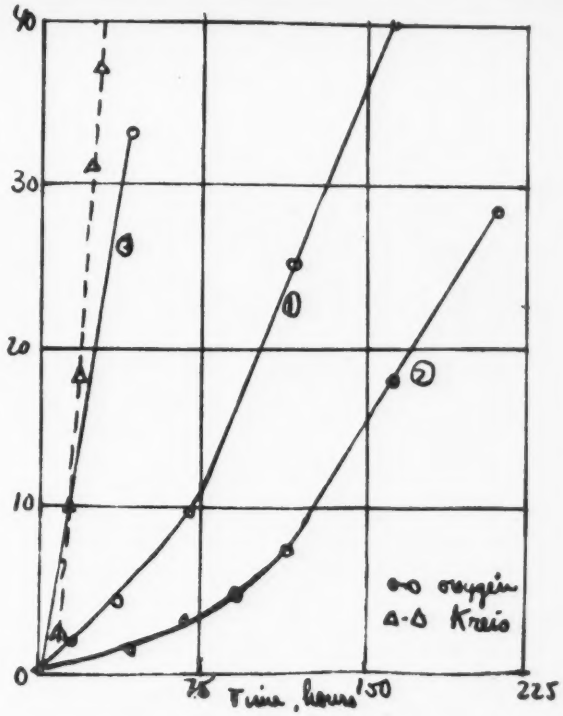

FIG. 4

1. Beef kidney fat A. 27.1°C. 2. Beef kidney fat B. 27.1°C. 3. Beef external (extd.) 25°C.

Fat	Iodine number	Sapon. equivalent	Free acidity (as percentage oleic).	Color of the melted fat (as percentage N/100 K Cr O).
A	42.51	285.2	0.24	30
B	40.25	284.0	0.18	11

The extracted fats were now chopped, spread on glass plates, and irradiated under conditions similar to those employed in the previous experiment. The result expressed graphically in Fig. 5 (i) and (ii), shows that the general difference between the two fats still held.

The difference in susceptibility of these two fats cannot be attributed to moisture, connective tissue, enzyme or blood content, but must, in the main, be due to their chemical nature. The possibility that the fat pigment may play some part in

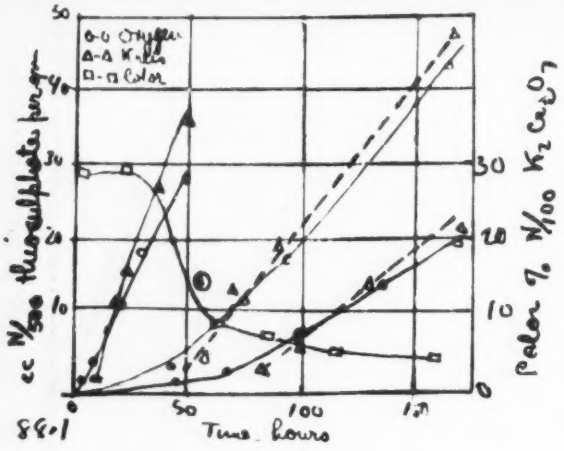

FIG. 5

1. Extracted beef kidney A fat lamp. 27.3°C.
2. Beef kidney fat B lamp 27.3°C.
3. Beef kidney fat B winter sky light 17.2°C.
4. Beef kidney fat A lamp. 27.3°C.

the oxidation must not, however, be forgotten. No attempt was made to correlate susceptibility with age, food, breed, etc., of the animal.

The Bleaching Action of Light

IT is well known that the pigments present in natural fats often may be destroyed by exposure to light, in fact this principle has been applied technically in the refining of oils. In order to investigate the relationship between color change and the general oxidation process a rather deep-colored specimen of beef kidney fat (a) was used. The extracted fat was powdered, spread on a glass plate, and exposed as usual in a constant temperature room at 25° C. to the light from a 100-watt lamp. The active oxygen content was determined at intervals, and in addition samples each of about 3 g. were removed, rapidly melted, and the color compared with a series of tubes containing known dilutions of N/100 potassium bichromate solution. The results are plotted in Fig. 5 (iv). It is evident that by the time the linear part of the oxidation curve is reached bleaching is already complete. The solid finally obtained was pure white and lard-like in appearance, quite different from the original yellow fat.

Kreis Test Relation to Active Oxygen

AS already mentioned in addition to that test for active oxygen, use was made of the Kreis reaction to follow the oxidation of fats under the influence of light. It has been stated by Holm and Greenbank (1923) that the intensity of the Kreis test is directly proportional to the amount of oxygen which has been absorbed by the fat. From the preceding diagrams (Figs. 3, 4, and 5) it will be seen that in the present experiments a distinct parallelism has been found between the "active" oxygen content of a fat and the intensity of the Kreis reaction.* This relationship, however, is not constant but may vary greatly under different conditions. At low temperature, the rate of increase of the Kreis reaction is much smaller than that of the content of active oxygen, but in bright sunlight the Kreis reaction increases much more rapidly.

The temperature coefficient for the accumulation of active oxygen between 7.4° C. and 27.5° C. is approximately 1.83, that for the Kreis reaction considerably higher.

Oxidation in the presence of light appears to have little effect, at least in the earlier stages, upon the free acidity of the fat. No detectable increase could be observed for low contents of active oxygen, while titrations up to 60 c.c. of N/500 thiosulphate solution per gram resulted only in increases of the order of 0.2 to 0.3 per cent. (Calculated as oleic acid.)

Summary

A QUANTITATIVE test for the detection of oxidation in fats has been described, together with a technique for quantitative application of the Kreis reaction. A new method for determination of the relative susceptibilities of fats to oxidation has also been outlined.

Oxidation is accelerated sensibly by weak artificial light, while exposure for a few minutes to direct sunlight is sufficient to produce rancidity.

The reaction is autocatalytic and even brief exposure to light accelerates the subsequent oxidation.

The existence of differences in susceptibility between various specimens of beef fat has been pointed out, and the effect shown to be due to the chemical nature of the fat rather than to the non-fatty material present.

Bleaching of the yellow pigment of beef fat has been shown to occur at a comparatively early stage in the oxidation process.

The relationship between intensity of the Kreis test and active oxygen content of the fat has been found to vary with the temperature.

APPENDIX I

The Active Oxygen Test

RESULTS obtained in this test depend upon the proportions of fat and solvent employed. When too high a concentration of fat is used results are low owing to absorption of iodine, particularly in the case of a highly unsaturated fat. The magnitude of this effect has been investigated

in the case of beef kidney fat (iodine number 42.5) and cod-liver oil (iodine number 177.6). A specimen of each fat was oxidized in a constant temperature room under the influence of light from a 100-watt lamp. At intervals a sample was removed and the apparent active oxygen value determined using 1 g. of fat in 4, 9, 19 and 32.3 c.c. of solvent. Fig. 7 (i) and (ii) shows the effect of concentration on the absorption of iodine, when the true active oxygen content of the fat (obtained by extrapolation to zero concentration) was in each case 40 c.c. N/500 thiosulphate solution per gram.

Using 1 g. of fat in 19 c.c. of solvent it is evident that the fraction of the total peroxide measured is about 95 per cent in case of beef kidney fat and 85 per cent in that of cod-liver oil. For other contents of active oxygen the figures obtained were as follows:

True active oxygen content (c.c. N/500 thiosulphate per gram)	Percentage measured (1 g. fat in 19 cc. solvent)	
	Cod-liver oil	Beef kidney fat
40	85	95
20	86	95
10	89	96
5	92	98

Results obtained with any particular concentration of fat in solvent are quite definite and reproducible. No correction for absorption of iodine has been applied to any of the experimental results given in this paper.

In a further experiment, Fig. 7 (iii) and (iv), 1 g. of fresh unoxidized fat was used in conjunction with different volumes of solvent, the iodine (equivalent to 40 c.c. N/500 thiosulphate solution) being provided in each case by the requisite quantity of benzoyl peroxide. It was possible by this means to determine directly the loss of iodine at each dilution. The absorption was now found to be much smaller than when the iodine was liberated by the fat peroxide. It is possible that addition of iodine to the double bonds of the fat occurs most readily at the instant of removal of the oxygen.

The presence of protein in not too large quantities, e.g., animal fats in the tissue, etc., does not interfere with the determination except in that absorption of iodine by the non-fatty material renders the end point in the titration somewhat slower and less definite.

The following materials are required for a determination (i) a solvent mixture consisting of glacial acetic acid and chloroform in the proportion of 2:1 by volume; (ii) potassium iodide as solid and as a roughly 5 per cent solution prepared by dissolving the crystals in freshly boiled and cooled distilled water. The solution should be made up only as required; (iii) sodium thiosulphate solution (N/500) prepared by dissolving sodium thiosulphate crystals and sodium carbonate (anhydrous 0.1 g.) in carbon dioxide free water (5 litres). The solution is kept in a siphon bottle fitted with a soda-lime guard tube and protected from light.

Standardization is carried out as follows: To 10 c.c. of standard N/100 potassium bichromate solution, 5 per cent potassium iodide (20 c.c.) and concentrated hydrochloric acid (10 c.c.) are added, and the liberated iodine titrated at once. A blank is carried out using 10 c.c. of distilled water in place of the bichromate, and immediately after addition of the acid running in distilled water (boiled and cooled, 50 c.c.) from a burette. The standardization should be carried out in artificial light. Under these conditions the blank does not usually exceed 0.3 to 0.5 c.c.

The apparatus used is simple. Strong thick-walled test tubes 17 mm. in diameter are required. The tubes are fitted with rubber stoppers, machine bored with one hole (circa 4 mm. in diameter). A glass plug 8 mm. in diameter, 3 cm. long, rounded at one end and flattened at the other, and a nitrogen cylinder fitted with fine adjustment valve are also necessary.

A determination is carried out as follows: The

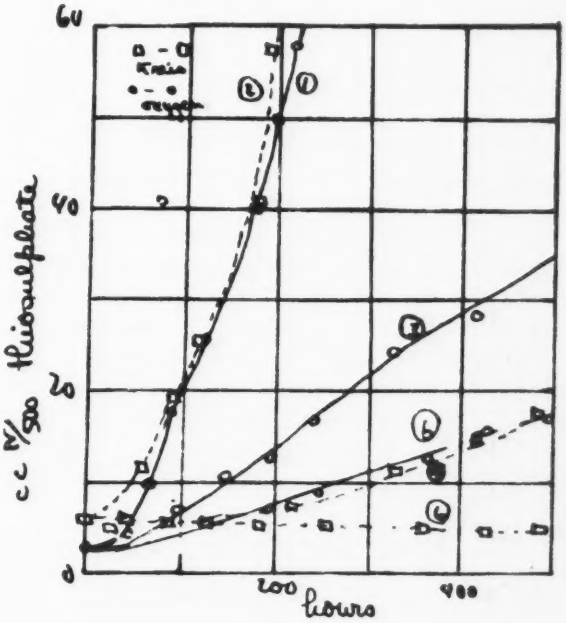

FIG. 6

1. Active oxygen 27.5°C.
2. Kreis reaction 27.5°C.
3. Active oxygen 7.4°C.
4. Kreis reaction 7.4°C.
5. Active oxygen 9.4°C.
6. Kreis reaction 9.4°C.

* It should be noted, however, that the units in which values of the Kreis intensity are plotted are obtained from an arbitrarily chosen set of permanganate standards.

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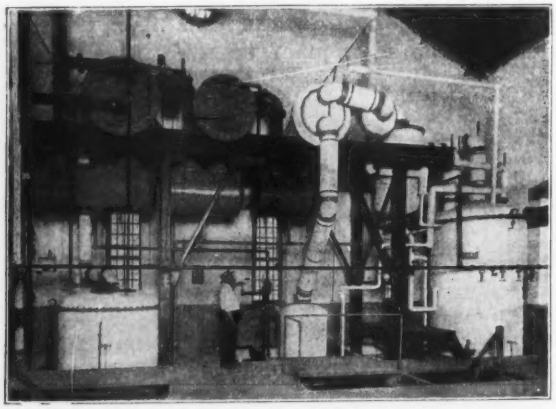

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fat (1 g.) is weighed into the tube, solid powdered potassium iodide (1 to 2 g.) added, and the solvent mixture (19 c.c.) run in from a graduated pipette, washing down any potassium iodide adhering to the walls of the tube. A rubber stopper is fitted, the tube supported in some type of stand in which it is protected from light, and a steady stream of nitrogen passed for two minutes into the air space above the liquid by means of a narrow glass jet which passes loosely through the hole in the stopper. The jet is then removed, the finger placed lightly over the hole, and the tube heated in an inclined position (rotating to prevent cracking) over a very small flame applied to the bottom of the tube. When the liquid is bubbling fairly freely the tube is plunged into a large boiling-water bath. The liquid rapidly boils, the chloroform vapor expelling the nitrogen and any remaining air. As soon as vapor is issuing from the hole, as shown by condensation on the edges, the finger is removed and a glass plug forced in. This operation should be carried out when the frothing liquid is nearly at the top of the tube. The closed tube is shaken vigorously for a few seconds and cooled under the tap. The stopper is then removed, the liquid instantly poured into a conical flask (150 c.c.) containing 5 per cent potassium iodide solution, the tube rinsed out twice with potassium iodide and the free iodine titrated. It is advisable to carry out the determination by artificial light. The author's room at the Low Temperature Research Station is fitted with dark blinds. Illumination is obtained from a single 60-watt lamp, and the boiling, cooling and pouring-out processes are carried out screened from direct light (the operator's own shadow will suffice). Titration is carried out with the aid of a daylight lamp, the end point being perfectly sharp and (in artificial light) displaying no tendency to "go back." A routine determination occupies roughly half an hour.

APPENDIX II

The Schiff Reaction

THE fat (1 g.) is weighed into a small tube (3 inches by ½ inch, as used for the Kreis test), chloroform (1 c.c.) added and the tube warmed with shaking until solution is effected. The tube is then cooled and 0.05 per cent fuchsinsulphurous acid reagent (1 c.c.) is added. The mixture is shaken for one minute and allowed to stand in a dark cupboard for 10 minutes. A milk-white emulsion indicates a negative reaction, and a violet color a positive one. The test is of the same order of sensitivity as the Kreis reaction, but does not lend itself so readily to quantitative use.

The author wishes to express his thanks to Mr. C. R. Barnicoat M.Sc., for the use of results in Fig. 3, and to the Salters' Institute of Industrial Chemistry for a Fellowship during tenure of which this research has been carried out.

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Harvest Tung Nuts

The Southern Chinawood Oil Company, owners of a 1,250-acre farm near Pascagoula, Miss., will this month begin the harvesting of a crop of tung oil nuts that is estimated to yield 40,000 pounds. The nuts are now beginning to ripen, many of them having already fallen to the ground. These nuts will be sold for seed, as there is quite a demand for planting seed in this section, and will be the first commercial crop of tung nuts ever produced in Mississippi.

The company is incorporated under the laws of Wisconsin, with Henry Bryant, of Waukesha, as president. W. M. Colmer, of Pascagoula, is one of the directors of the company. They first began operations in 1926, when 100 trees were planted. In 1928, 10,000 additional trees were set out, the stock coming from Florida, and not a single tree was lost in this planting. Fifteen thousand trees were planted in 1929, 15,000 in 1930, and there are now 20,000 nursery trees to be planted in the early spring of 1932. The company now has 600 acres planted, 165 acres of which contain the 10,000 trees planted in 1928, which have a full crop on them this year. Next year 15,000 additional trees will come into a full crop. The company is planning to put in a crushing plant next year, to take care of the increased production which the additional trees will bear.

In addition to the company's holdings, several farmers in south Mississippi have plantings of tung trees, Jim Howell, of Moss Point, has 160 acres planted to 15,000 trees which will come into bearing next year, and George Leavenworth, of Fountainbleu and Ocean Springs, has a planting of 100 acres, besides smaller groves in and around Escatawpa. The soil of the section seems peculiarly adapted to tung tree culture, and it promises to become one of the industries of the county.

The first tung oil trees planted in the county came from the United States Department of Agri-

culture about twenty-five years ago, and were distributed among farmers in the section for experimental purposes. Some of these trees are still bearing nuts. There are several of them on the farm of the late Frank Hurd of Nutbank.

—o—

Russian Oil Industry

Before the war Russia had such a large production of oilseeds that exports of oilseeds and vegetable oils were possible. Until the year 1925 the oil production had not yet resumed its former importance and was almost exclusively in the hands of peasants for their own requirements. In 1926 there were about 25,000 primitive oil presses in the country, while only a few large plants were in operation. The general neglect of agriculture up to about 1928 also resulted in a neglect of the cultivation of oilseeds, so that instead of the former surplus of vegetable oils there was a shortage for domestic consumption. Since 1928 the development of the vegetable oil industry was systematically advanced by the reorganization and reopening of the larger oil mills and by increasing the cultivation of oilseeds. The delivery of suitable seeds to the mills was assured by contracts with the co-operatives, and since 1930 the cultivation of oilseeds has also been proceeding on the large state farms.

The area under cultivation with oilseeds was already considerably larger in 1925 than before the war. The peasants preferred to handle oilseeds rather than grain, which was taken away from them at fixed prices, while they had a comparatively free hand with oilseeds. The cultivation of sunflower seed increased from 2,627,000 hectars (about 6½ million acres) in 1926 to 3,526,000 hectars (about 8¾ million acres) in 1929, and in 1931 it is to amount to more than 4,000,000 hectars (10 million acres). Other oilseeds covered 244,000 hectars (about 600,000 acres) in 1926 and 446,000 (about 1,100,000 acres) in 1930. For quite some time considerable quantities of cottonseed had been available. A few years ago the cultivation of soya beans was started. In 1930 about 330,000 hectars (about 800,000 acres) were under cultivation, while in the current year the area is reported to be 900,000 hectars (2¼ million acres). Soya beans are planted very little by farmers and peasants, but on a very large scale on state farms which turn over almost the entire crop to the large oil mills. The cultivation of other oilseeds on the state farms was not commenced until 1931, the major part of these being delivered by the co-operative groups. The total production of oilseeds is reported at approximately 3,100,000 tons in 1929 and is to amount to more than 6,000,000 tons in 1931.

At the present time Russia is understood to have about 470 large oil mills of which 300 have up-to-date equipment. During the last two years several new large plants were opened, and the production of vegetable oils in the state plants is reported as 333,300 tons in 1930, while in the current year it is to be brought up to 480,100 tons. In addition the co-operative groups are to produce further 17,000 tons of oil in the current year.

—o—

A tract of land comprising about 2,000 acres of land has been acquired near Bundanoon, in the Kangaroo Valley district of New South Wales, Australia, by a newly formed company known as Tung Oil, Australia, Ltd., which is reported as preparing to enter into a program of tung tree development on an extensive scale. The company has also purchased a tung tree nursery at Pennant Hills, near Sydney. Tung trees have already been grown successfully at the latter place and a large number of these trees are now being grown there. It is stated that American capital is behind the enterprise.

—o—

Machinery has been shipped from England to Jamaica, B. W. I., for installation in a new edible oil factory which the Jamaica Coconut Growers' Association proposes to establish locally. An American firm has secured the contract for supplying box shooks for the marketing of the canned oil products. The requirements of the concern in containers will be 80,000 tin cans annually. These will be imported in sections and assembled at the factory.

—o—

Wesson Oil and Snowdrift Company, Inc., and subsidiaries—Year ended Aug. 31: Net profit after depreciation, Federal taxes, other charges and absorption of write-down in inventory due to decline in cottonseed products, $2,546,861, equal after preferred dividends to $1.86 a share on the common stock, compared with $3,208,420, or $2.78 a share, in the preceding fiscal year.

—o—

A revised definition for mayonnaise was adopted by the United States Food and Drug Administration November 10. It calls for a minimum content of 50 per cent of edible vegetable oil.

—o—

A grain elevator of the Early & Daniel Company, Cincinnati, was destroyed November 17 by fire, causing an estimated loss of $150,000. The elevator contained 1,000,000 pounds of soybean meal and 40,000 bushels of soybeans.

Circulating Rendering Process

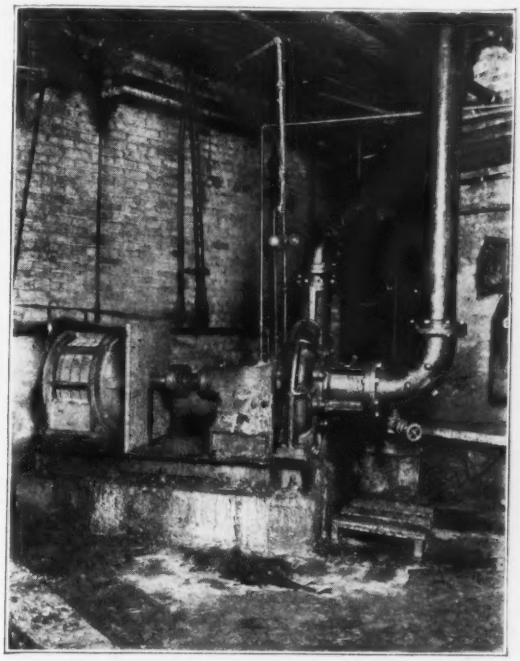
(*From Page 82*)

but this is offset by having the material under vacuum. In rendering, as in evaporation, the rate of heat transfer is approximately proportional to the difference in the temperature between the heating medium and the medium being heated. The forced circulation of the material over the heating surface is, of course, the chief factor in the rapid heat transfer and reduction in rendering time. The entire charge is circulated through the heating tubes approximately every three minutes.

The maximum temperature of the material is usually around 185 deg. F. and never above 200 deg. F. The vacuum runs up to a maximum of about 28" at the finish. The color of the fat is better and the F.F.A. lower than with the old dry melters. With the lower temperature and shorter time of operation there is no formation of mucilaginous products.

Aside from the improved quality of the product there is a great saving in steam, labor and power. The heating is all done with exhaust steam which is available from the power generators. The amount of steam required varies with the moisture content of the material, but since much of the material rendered at the Darling Plant runs up to 75-80% moisture it will be readily appreciated that the total steam requirement is very high. The steam consumption is slightly under 1.2 lbs. exhaust steam at 4 lbs. pressure per pound of moisture driven off. The labor is reduced through improved handling which is facilitated by the larger batches in the Circulating Rendering System as against the old fat melters. Two Circulating Rendering Units are doing the work formerly done in ten dry melters. The power consumption is considerably less since the chief power requirement is that of the circulating pumps. On the two units installed at the Chicago Plant the circulating pumps have 30 H.P. motors. These render a minimum of 16,000 lbs. of material, each, in 2 hours. The old dry melters had 15 H.P. motors each, and it required 10 of these melters to do the same work, or 150 H.P. against the present 60 H.P. The motive power requirements may be further compared as follows: A horizontal dry melter 5′ diameter by 16′ long and driven by a 40 H.P. motor renders a charge of 16,000 lbs. of material in 8 to 9 hours. The Circulating Rendering Plant renders a charge of 16,000 lbs. material in 2 to 2½ hours and is operated by a 30 H.P. pump motor.

The Circulating Rendering Process, is as has been previously stated, operated under vacuum and all vapors are condensed in the barometric condenser. This precludes the discharge of any obnoxious vapors in the rendering of low grade inedible materials.



Circulating Pump On Circulating Rendering Plant

Since the only moving part in the Circulating Rendering Process plant is the circulating pump, there is expectation and assurance that the equipment will have a long life and that maintenance charges will be low.

The Future of the Process

THE Circulating Rendering Process is at present used commercially only on inedible materials including garbage, fat and bones. From the standpoint of the physical condition of the material and the problems involved in handling, edible materials are more easily rendered by this process than the inedible. Several tests have been made on edible materials with satisfactory results.

With the present experience there is no other possible conclusion than that the Circulating Rendering Process is universally applicable for rendering on a large scale. Its use will result in improved products and considerable simplification and economy in operation.

—o—

The Deli-New York Agreement on April 27th announced that henceforth rates on palm oil in bulk would be on a weight basis rather than measurement. The basic rate established was 30.50 guilders per metric ton ($12.26 U. S. Currency), from Belewan to Atlantic Coast ports of the United States with the additional rate of 1.50 guilders ($0.60 U. S. Currency) on shipments to Gulf ports of the United States.

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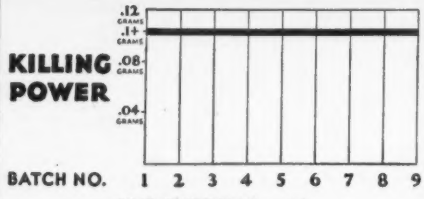

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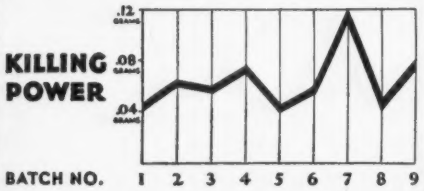

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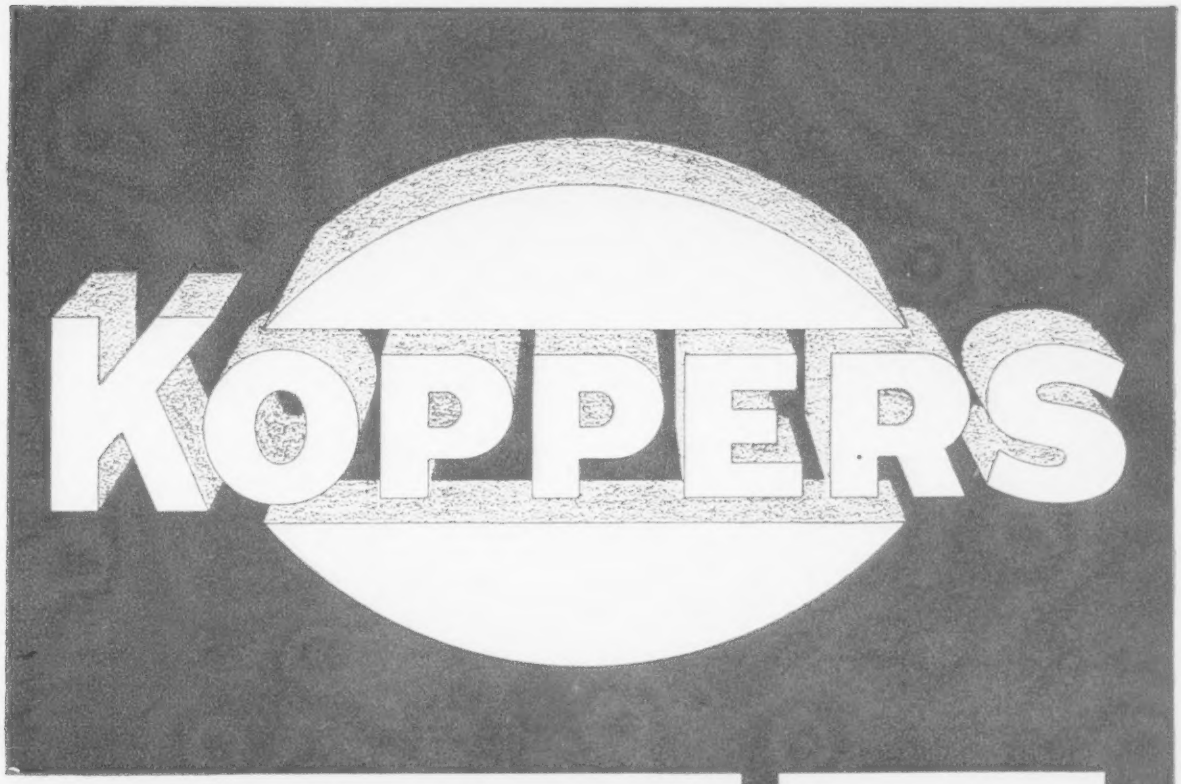

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Whatever Helps a Little, Helps a Lot

Are you making a product that ought to be perfumed, or that would sell better if it were?

Does your product have an unpleasant odor that nourishes sales resistance?

These are not *out-of-the-ordinary* conditions. We meet them daily.

If you have a problem in which perfuming may help, consult us. Even if you haven't thought of it as a problem, show us your product and let us see if we can improve matters.

Perhaps our effort will point the way to increased sales. These are times when anything that helps at all, helps a lot.

In this sort of work, there is no obligation either way. We ask nothing of you but a willingness to buy our perfume materials if they do a good job at a fair cost.

We are not always successful, but our average of successes is pretty high. We do not hesitate to tell you the truth about what our products can or cannot do for you.

—if we have the opportunity.

—and that's up to you.

van Ameringen-Haebler, Inc.

Aromatic Essentials

315 Fourth Avenue, New York
180 No. Wacker Drive, Chicago
619 Clark Avenue, St. Louis
42 Wellington Street, E., Toronto

Factory, Elizabeth, N. J.

Say you saw it in SOAP!

Haebler, Inc.

Better Odors Often Make Better Sales

van Ameringen-Haebler, Inc., is an organization of about sixty people. We maintain several offices, and a factory. We import and manufacture perfume materials for use in

Soap	Disinfectants
Shampoos	Insecticides
Liquid Soap	Fungicides
Perfume	Paint
Face Powder	Urinal Blocks
Cosmetics	Moth Repellants
Hand Soap	Metal Polish
Soap Powder	Leather
Ink	Fabrics
Paste	Hair Preparations
Ointments	Antiseptics

and many other materials

We invite a frank statement of the conditions which our odors are expected to overcome. If possible send us a sample of your product *unperfumed*. We will be glad to work on it and return our suggestions and quotations.

van Ameringen-Haebler, Inc.

Aromatic Essentials

315 Fourth Avenue, New York
180 No. Wacker Drive, Chicago
619 Clark Avenue, St. Louis
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Say you saw it in SOAP!

Baird's *Certified* Disinfectants

of coal-tar are so named because every lot is tested and certified to by independent analysts, thus insuring to the buyer a guarantee of quality and strength. A copy of the bacteriological certificate will be furnished whenever requested.

The name BAIRD'S on a container of disinfectant means not only that it is a certified product, but one which represents over a quarter of a century of manufacturing experience and technical skill . . . insuring uniformity of composition . . . unformity of quality . . . uniformity of result. BAIRD'S Certified Disinfectants dilute readily with water to form rich, milky emulsions.

Whether your disinfectant requirements are large or small, or whether the coefficient is two or twenty or any intermediate strength, let us figure with you. Samples will be submitted for your inspection, and we will be glad to give you the benefit of our many years of experience as specialists in this line.

Cresylic Acid Animal Dips Household Insecticides

Made Right—Priced Right

BAIRD & MCGUIRE, INC.

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New York Representatives
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Warehouse stocks at convenient points throughout the country.

Say you saw it in SOAP!

INSECTICIDE AND DISINFECTANT SECTION

A Department of SOAP

SOAP is official publication of *The Insecticide and Disinfectant Manufacturers Association.*
Harry W. Cole, Holbrook, Mass., Secretary.

The 18th Annual Convention

THE Eighteenth Annual Meeting of the Insecticide & Disinfectant Manufacturers Association closed last week with the Association in the strongest position in its history; both numerically in membership and financially. The meeting was one of the best ever held. It emphasized the live, verile character of the Association today, and the constantly growing importance of the industries which it serves. In spite of unsatisfactory business conditions, the convention was an unusual success both in attendance and accomplishments. We look forward to a continuation in the expansion of the activities of the Association.

—o—

No Grounds For Criticism

WE understand that some criticism has been leveled at the Insecticide & Disinfectant Manufacturers Association for its recent action in submitting for acceptance or rejection the new and more stringent resolution of the Federal Trade Commission against premiums to its membership. The secretary, in particular, has been singled out and accused of instigating the action of the Commission. We happen to know that this is absolutely untrue, and that the Association, its Board of Governors, and its secretary acted only as they were compelled to act in response to a *demand* by the Commission. There could be no delay,—the secretary obtained two postponements as it was,—there had to be an answer to the question of the Commission. We believe that the situation was handled in a manner which prevented what might have been troublesome activity. Furthermore, we fail to see where conditions differ today at all from those which applied after the Indianapolis conference five years ago. There is certainly no basis for criticism by the premium houses.

—o—

The New York Regulations

NEW regulations covering fumigating and exterminating, and the packaging, sale and use of toxic, poisonous, and noxious insecticides and fumigants, have been adopted by the New York City Board of Health. In the new rules, most phases of fumigating and exterminating are restricted to the licensed fumigator and exterminator. Sodium fluoride when sold or used as an insecticide must be tinted a nile blue, which color is shown on the cover of this issue of the Insecticide & Disinfectant Section.

The new regulations have been carefully drawn under the direction of Dr. Edward Bocker, Chief of the Drug Division of the Board of Health. They have been formulated with the advice and counsel of interested manufacturers, exterminators, and representatives of the United States Public Health Service. Particular care was taken to avoid hardship on any trade group or groups, but this care was exercised in keeping with what was deemed necessary to protect the public health.

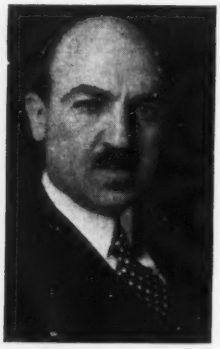
(*Turn to Page* 133)

President
Evans E. A. Stone
William Peterman, Inc.

Secretary
Harry W. Cole
Baird & McGuire, Inc.

1st Vice-President
Peter Dougan
Merck & Co.

Treasurer
John Powell
John Powell & Co.



2nd Vice-President
S. H. Bell
Koppers Products Co.

BOARD OF GOVERNORS

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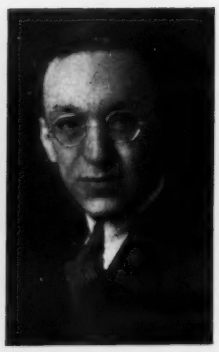
Baird & McGuire, Inc.

F. A. Hoyt
Frederick Disinf. Co.

H. W. Hamilton
Koppers Products Co.

Dr. Robert C. White
Robert C. White Co.



J. L. Brenn
Huntington Labtr'ies.

Insecticide and Disinfectant Makers Meet in New York

THE election of Evans E. A. Stone, William Peterman & Co., as president of the Insecticide and Disinfectant Manufacturers Association for the year 1932 came as the conclusion to the largest and most enthusiastically attended convention which the Association has ever held. Over two hundred delegates from companies manufacturing insecticides, disinfectants and allied sanitary products attended the sessions of the eighteenth annual convention which were held in the Hotel New Yorker, New York City, December 7 and 8. After designating Evans Stone to succeed Dr. Robert C. White, who completed two terms as president, the Association advanced Peter Dougan, Merck & Co., to the position of 1st vice-president. Samuel H. Bell, Koppers Products Co., was elected 2nd vice-president. John Powell, John Powell & Co., and Harry W. Cole, Baird & McGuire, were returned to their respective positions as treasurer and secretary of the Association.

The following members were elected to the board of governors to serve during the year, 1932: W. J. Andree, Sinclair Refining Co.; Simon S. Selig, The Selig Co., Atlanta; J. L. Brenn, Huntington Laboratories; C. P. McCormick McCormick & Co.; Dr. C. H. Peet, Rohm & Haas Co., and William Zick, Stanco, Inc. These, together with the following past presidents, make up the board: H. W. Hamilton, Koppers Products Co.; C. C. Baird, Baird & McGuire, Inc.; Fred A. Hoyt, Frederick Disinfectant Co.; M. M. Marcuse, West Disinfecting Co.; Dr. Robert C. White, Robert C. White Co.

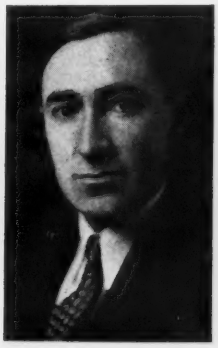
Although unusually well attended, the sessions of the eighteenth annual meeting were not productive of such hotly contested arguments as have often featured previous sessions. The subjects of insecticide and disinfectant testing were touched on only briefly and the attention of the meeting was concentrated on ways of curing present trade evils, methods of combating the depression and suggestions for broadening the trade of members of the industry. The single resolution adopted by the resolutions committee had to do with educating the public to the need for use of insecticides and disinfectants. It read as follows: "Resolved that the scope of the activities of the publicity committee of this association be widened to include general publicity calculated to expand the consumption of products manufactured by members of this association through better acquainting the public with the vital need for the use of insecticides and disinfectants in promoting public health and avoiding disease, and further resolved that the present activities of this committee involving publicity for the association in the trade press be continued, but as a part of the general publicity above described.

A second resolution was offered by C. C. Baird that the association ask Dr. Austin M. Patterson to continue his work in cooperation with the Nomenclature Committee and report on the use of

MEMBERS OF THE BOARD OF GOVERNORS, 1932.

Dr. C. H. Peet
Rohm & Haas Co.

C. P. McCormick
McCormick & Co.



W. J. Zick
Stanco, Inc.

W. J. Andree
Sinclair Refg. Co.

Simon S. Selig
The Selig Co.

the terms, creosote, tar acid oil and crude carbolic acid. Dr. Patterson's report on the use of the words, antiseptic, bactericide, deodorant, disinfectant, disinfect, germicide, insecticide, prophylactic and sterilize, was one of the features of the recent meeting. A second topic of considerable interest and discussion was the new ordinance recently adopted by the New York City Board of Health to control the exterminating, fumigating and insecticide industries. The new ordinance is published in another part of this issue.

Another development reported to the members at the New York meeting was the introduction of a new bill in the New York State Senate. The bill, number 1131, introduced by Senator Kirkland, seeks to control the use of agricultural insecticides. It contains a clause which might be interpreted to give the same control over household insecticides, if adopted. As the provisions of the bill are unusually severe, members of the association were advised to take immediate steps to secure modification of the objectionable clause so that household insecticides would be excluded from its provisions.

The opening session of the convention was called to order by President Robert C. White on Monday morning, December 7. The first steps were the appointment of a resolution committee, headed by Evans E. A. Stone, and a nominating committee, headed by H. W. Hamilton. President Robert C. White and Secretary Harry W. Cole presented their annual reports as follows:

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Report of the President

By ROBERT C. WHITE

Robert C. White Chemical Co.

THE year 1931 is swiftly drawing to a close, completing two years unprecedented in business history for difficulties, turmoil and disaster. It is quite probable that our lines of business have been no more affected than many others, and a roster of the membership of the Association presents the names of individuals and firms who entered this difficult era as being still with us. This in itself may be quite an endorsement of the value and benefits to be derived from such an association as ours, as it will be noted that practically all the leaders in our industry are associated with us, and while our industry may not show improvement from the viewpoint of increased business, undoubtedly a great number who were not specifically fitted for our line of endeavor are gone. Among trade associations we stand unique in that our membership has increased and our financial strength is undiminished. Much has been done during this period to improve the quality of our goods, and to elevate our standards. We sincerely trust that in this improvement of quality and standards as relating to our products there may have been a corresponding improvement in our standards of ethics, and still there remains much work to be done in this direction, as many of our members have not given consideration to this question of standards and high quality, much less accomplished them in the operation of their own business. Complete trust and confidence between our members is something which cannot be created, but must be earned. Deceptions and sharp dealings, over-enthusiastic claims, and statements not based on fact must be eliminated before we can make on the general public the impression desired for the complete success of our business.

Our banding together for a common endeavor was not for the sole purpose of obtaining information, nor was it intended primarily for the good of the individual member, it was anticipated that ours would be a joint move for the good of all, and for the elevation not of the specific businesses, but for the industry as a whole. Every unnecessary and unwarranted attack on the products or business dealings of a competitor brings discredit on our association, and on our products as a whole from the buying public at large. We still continue to suffer from lack of confidence on the part of the ultimate consumer and much of this is engendered from unethical methods, or products for which we ourselves are responsible. Such practices must be eliminated.

DURING recent months unusual and outstanding work has been done in regard to nomenclature, splendid work has been done regarding standardization methods. Much of this has been done at personal expense of both money and efforts, and to the gentlemen who have given untiring service in this direction we owe our sincerest thanks.

The education of those within our ranks must continue, as the continual and never-ending influx of those into our industry who are totally unfitted for it, creates the gravest difficulty which we must face, and largely accounts for the great number of uninformed, who while not in our Association would launch themselves into our industry and present an ever-present menace to good policies, and good products.

The preservation and promotion of our industry is unquestionably based on our unremitting efforts to elevate the industry as a whole. Nor can we ignore our responsibility in this matter, as it is the duty of every individual involved, to bring into our Association those engaged in our profession in order that they too may benefit from the same source as ourselves, as it must be readily apparent that the results will be mutually beneficial.

Indications are that business is reviving. Commerce is casting off its cloak of gloom. History shows that business depressions have only been short-lived, and we should press hopefully forward, fully assured that our policies for improvement will prevail. There is much to be accomplished, and only the earnestness of each individual member can make our work completely successful.

Your President would take this opportunity to thank the officers, the board of governors, and the various committeemen for the efforts they have put forth, it being fully realized that troublesome times, such as those through which we have passed, make it much more difficult for the individual to take the time from his own business in order to work for the common good. He especially compliments your Secretary on the untiring efforts which he has put forth in your behalf, and appreciates very much from a personal standpoint the efficient and courteous assistance which he has at all times extended to your president. Let us proceed with our deliberations in all earnestness, to the end that much good may result.

—o—

Report of the Secretary

By HARRY W. COLE

Baird & McGuire, Inc.

SINCE the first of the year, we have had occasion to issue on an average of one bulletin a week. A number of these have referred to pending legislation, directly or indirectly affecting our industry. We are glad to report that not one of these bills which was in any way objectionable to us, was allowed to pass. Among the most troublesome of these bills were those relating to economic poison. One bulletin in particular which created a considerable amount of correspondence was that of August

25th dealing with foreign corporation laws. It is believed it is now generally understood that if you do not maintain an office or warehouse in a foreign state (by which is meant a state other than that in which you are located), nor employ salesmen there who turn over their orders to local jobbers to be filled, that you cannot be regarded as being domiciled in that state, and are therefore not subject to the provision of its foreign corporation law.

Throughout the year our official publication, *Soap*, has kept you informed of what was going on in the industry. Many of our bulletins have been reprinted in whole or in part in this magazine. Since last we met in annual convention, the Board of Governors have held four meetings; three in New York City and one at Chicago. The attendance has been large, and the interest all that could be desired. Some of the Board members have come from distant points to be present at these meetings.

At this time we have a membership of 106; 76 Active, 29 Associate and 1 Honorary, which represents an increase of approximately 12 per cent over the number of members enrolled at this time last year. The Treasurer's Report shows that the Association is in a sound, healthy condition, with a substantial sum of money in the bank to meet current expenses as well as ordinary emergencies. It is generally conceded that in times of depression trade associations are,—or should be,—of particular value to those whom they serve. Yet, experience has shown that over the past two years, many trade organizations have had their ranks depleted largely through financial stringency. It is gratifying to report that despite these adverse conditions of our Association has gone ahead steadily with an increase in both numbers and revenue.

The expense this year has in some ways been heavier than usual. We have added to our office equipment to enable you to obtain better service. We have had some legal expense in connection with re-incorporating the Association under the laws of the State of New York. We have had two separate audits made of the Treasurer's books, in order that the new Treasurer might proceed with a clean slate. Various sums of money have been expended for purposes of standardization, and an expenditure of $1,500 has been authorized for research in nomenclature. Notwithstanding this extra outlay, we have so managed to conserve our ordinary expense that we have a larger reserve than for some years past. Through the splendid work done by our Treasurer, Mr. Powell, we are glad to say that not one member is in arrears at this time. The officers, members of the Board, and all who have been entrusted with any measure of responsibility, such as Committee Chairmen, have worked throughout the year in close harmony. In spite of what has been regarded as an "off year" for Conventions, our meeting in Chicago in June broke all previous attendance records for a mid-year Convention, and was one of the most outstanding and constructive that our Association has ever held. If the sessions had been open to the public on that occasion, the attendance would undoubtedly have been even larger. Several years ago, as you will recall, we held the first of our series of closed-session meetings. The wisdom of this course has become so apparent that the Board of Governors at the October meeting this year were unanimous in their decision to have the sessions closed to the public at this time. It is understood that if any member of the industry is sufficiently interested in our activities to wish to sit in with us and share in our deliberations with a view to affiliating himself with the organization, he is priviledged to attend. We do not, however, cater to the idly curious nor to those who would attend for the express purpose of carrying away helpful ideas without in any way contributing to the good of the industry.

During the year death has entered our midst, and has removed three of our valued members. Mr. Charles A. Straw, Vice-President and a Director of the Standard Oil Development Company, a subsidiary of the Standard Oil Company of New Jersey, and who helped materially in the defense of the Terry Patent suit, passed away on Jan. 9th, following a brief illness. On March 21st, death claimed Mr. Phillip O. Schleussner, First Vice-President and a Director of the Roessler and Hasslacher Chemical Company of New York, and on June 28th Mr. Frank Hemingway, President of the Robinson, Butler, Hemingway Company, Bound Brook, N. J., passed into the Great Beyond. Mr. Hemingway was one of the organizers and the first President of our Association, and although he was not active in its affairs in recent years, he was one of our staunchest supporters. Those of us who had the privilege of knowing Mr. Hemingway intimately mourn his passing. He had the gift of eloquence and understanding, and it is very likely that had it not been for his leadership and organizing ability, our Association would not occupy the position of prominence it does today.

IN reviewing the work of the year, we are conscious that one of our greatest needs is that of simplified methods for testing products. For more than fifteen years, we have periodically wrestled with the problem of coefficient tests as applied to disinfectants, and while considerable progress has been made during this time along the lines of standardization, there is still a considerable difference of opinion as to the respective merits of the bacteriological methods employed. When our products are shipped to foreign countries, we must in self-defense use the same method of test that is employed abroad if we hope to compete. When making domestic shipments, we must conform to a method of test which is acceptable to the United States Department of Agriculture. Notwithstanding the years of effort which have been expended in scientific research to formulate a simplified method, the average bacteriological test today commands a charge of $25 to $50. There exists an urgent need for a simple and dependable test for disinfectants which would enable all manufacturers of this type of product to properly brand their materials, and to recommend accurate dilutions for its use. Our insecticide members find themselves facing very much the same problem. It is still a subject of debate as to whether the killing power of household insecticides may be best determined by chemical analysis or practical application. As a result, we have a somewhat divergent viewpoint on the efficiency of insecticides, a problem which in all probability the scientific members of our Association will be able ultimately to solve.

Some years ago it was suggested that the Association should maintain a laboratory for the testing of products of its members. Although a great deal of talk ensued as a result of this proposal, nothing definite has ever been done. It would, no doubt, prove very helpful to the members of the Association to have some central testing laboratory where products could be measured as to their effectiveness. There are some disinfectants and insecticides still on the market which are more or less misrepresented. Just a few weeks ago we had an opportunity to examine a bottle of coal tar disinfectant advertised as having a phenol coefficient of 10 to 12, and found upon investigation it consisted principally of mineral oil, and had a phenol coefficient of less than 0.1 of that of phenol. Such products, however, do not have a very widespread sale, for the Department at Washington is aggressively at work weeding out these fraudulent products when shipped into interstate commerce. Some of our household insecticides, too, are not beyond criticism, for they have been found to contain but very little, if any, pyrethrum, and some use such solvents as benzol and gasoline.

From time to time, we receive letters relating to the necessity for stating the contents of a package. As so many of the states now have net weight laws, it is desirable in every instance to have the labels show the net contents either by weight or fluid measurement. In the case of naphthalene and paradichlorbenzene, it is customary to state the weight when packed. More attention is being given today than ever before to proper packaging. Neither insecticides nor disinfectants will have a proper eye appeal unless dressed in an attractive package. Lithographed cans, of course, are always desirable, but in having these made it is doubly important to first know that the wording of the label is in accordance with the facts and that the product is in no wise misrepresented.

Perfumes For

THEATRE SPRAYS

It makes no difference whether you use alcohol or water as a base. We can supply an odor to meet your requirements—an odor that will prove popular with your customers.

A few suggestions

for alcohol base sprays	Lb.
American Thistle No. 1010	$2.25
Lilac No. 59	2.50
Gardenia No. 1756	5.00
New Mown Hay No. 319	2.75
Peony No. 446	4.00
Rose No. 310	2.50
Trefle No. 619	2.85
Violet No. 611	3.10
Wild Flowers No. 5300	1.75

Used one ounce to two gallons of alcohol—either full strength or diluted

for water base sprays	Lb.
Bouquet W. S. No. 636	$3.25
Honeysuckle W. S. No. 561	2.25
Narcissus W. S. No. 3855	2.75
New Mown Hay W. S. No. 260	2.50
Lilac W. S. No. 19	2.50
Oriental W. S. No. 3858	2.50
Rose W. S. No. 560	2.75
Trefle W. S. No. 4855	3.00
Violet W. S. No. 261	2.75

Used one ounce to three or five gallons of water according to strength desired

I&D MA — Insecticide and Disinfectant Manufacturers Association

P. R. DREYER INC.

26 Cliff Street New York

"It's the Odor that Sells the Product"

Say you saw it in SOAP!

We have seen a great improvement this past year in the claims made for paradichlorbenzene. The substance is an excellent moth-killer when used under proper conditions, and is also effective for certain other uses, but it is not in any stretch of the imagination a disinfectant or an air-purifier, and should not be advertised as such. The paradichlorbenzene industry has had somewhat of a setback as the direct result of irresponsible persons making extravagant claims for the virtues of the product. We have had our attention called to the fact that many of the household insecticides advertised to the public emphasize the ability of the product to kill flies or mosquitoes. Several years ago we stressed the fact that liquid insecticides could be made to sell the year round if the advertising copy was properly handled.

YOU are, of course, aware that our Association has accepted the revised resolution submitted by the Federal Trade Commission on May 29th, in place of the resolution which was adopted at the Trade Practice Conference of our industry in Indianapolis, Ind., in November, 1926. It is our understanding that the Federal Trade Commission proposes to send a copy of the revised resolution to each member of the industry for acceptance, and that if the majority of those who are engaged in our particular line are agreeable to its provisions, it will be made a standing rule by which the insecticide and disinfectant industries will be governed.

Later in this session you are to hear a report from the Chairman of the Committee on the Standardization of Nomenclature, which should be of particular interest, inasmuch as it embodies the conclusions of Dr. Austin M. Patterson, the lexicographer, relative to the definition of terms most commonly used by the industry. If an agreement can be effected whereby Dr. Patterson's conclusions will be accepted by government officials, scientists and manufacturers, it should put an end to much of the confusion which has heretofore existed.

Throughout the year our contacts with the U. S. Department of Agriculture, the U. S. Chamber of Commerce, the Proprietary Association, and a number of other trade organizations, have been frequent and friendly. We are working with these various other agencies in perfect accord.

The Association is to be congratulated on having as its leader and President during the past two years a man with the talent and outstanding ability of Dr. Robert C. White. It has been a very real pleasure to have been associated with Dr. White. He has been unsparing in the time and interest he has given to our affairs. He has attended all conventions, as well as all meetings of the Board of Governors, and has been in almost daily contact with the office of your Secretary. During his administration, a number of vexing problems have arisen, but all have been satisfactorily solved. Dr. White has devoted himself untiringly to the interests of the Association, and we owe him a great debt of gratitude. The fact that the Association is larger today than it has ever been, and its finances healthier than at any previous time in its history, is evidence of the skillful manner in which Dr. White has directed the affairs of the Association, and the cooperation he has had from its most loyal members.

The program which has been prepared for today and tomorrow is of a type, we hope, to interest you. Further than that it is sincerely hoped that as the sessions progress many helpful ideas will be unfolded and that when you return to your homes it will be with a conviction that each of our conventions is better than the one before, and that this one is the best and most helpful that has thus far been held. Your Secretary wishes to acknowledge, with appreciation, the helpful suggestions and cooperation he has received from the officers, the Board of Governors, and the various members of the Association, and hopes his work over the year has been of a character to merit your approbation.

OTHER reports during the first morning session included that of the treasurer delivered by John Powell. His report showed the association to be in the best financial condition in its history, with a substantial bank balance and no members in arrears. The membership committee, also headed by Mr. Powell, reported a net gain of two members since the last meeting, with ten resignations and twelve new members. In a report for the publicity a plan was outlined for dissemination of general publicity aimed to give a wider use of insecticides and disinfectants. The report of the trade ethics committee was given by Mr. Stone, and President White read his report as national councillor to the U. S. Chamber of Commerce.

After lunch, which was served in private dining rooms of the *New Yorker*, the meeting was resumed. Papers read included Dr. Charles H. Peet's report of the Committee on the Standardization of Insecticides, and an address on "Advertising an Industry," by Harold E. Mordan, formerly manager of the "Save the Surface" campaign. (Dr. Emil Klarman's report on "Recent Developments in Disinfection" will appear in full in January, along with the report of Dr. Peet). Copies of Dr. Austin M. Patterson's report, which was prepared with the cooperation of the Nomenclature Committee, were distributed and discussed at some length.

The Tuesday morning session was opened with a paper entitled "The Rat Flea as a Disease Carrier," by Dr. Charles L. Williams of the U. S. Public Health Service. It will appear in full in a later issue of *Soap*. Other reports of the morning included:

Report of Committee on Standardization of Disinfectants

By WILLIAM DREYFUS
West Disinfecting Co.

MEMBERS of our Association, who manufacture or otherwise market coal tar and other chemical disinfectants, have no doubt experienced some difficulties in the control work of bacteriological coefficiency for their products, particularly those members (the number of whom unfortunately is very small yet) who guarantee the coefficient of their products on the label of the packages. This leads sometimes to untold controversies between the laboratory, the manufacturer, the jobber and the consumer, principally due to the fact, that there are still a very small number of commercial laboratories in the country, scientifically equipped to carry out reliable coefficiency tests by standard methods.

Your committee has, therefore, engaged in actual research on this subject during this past year, by submitting type samples of coal tar disinfectants of low, medium and high testing coefficiency, to the three best organized commercial laboratories, and the results indicated that in spite of considerable variations at first, straightened out later by correspondence, fairly uniform corroborating reports were obtained, but it is most essential for each laboratory engaged in bacteriological testing of disinfectants, to adhere minutely to the technique of the prescribed

Don't just experiment with Rats and Insects . . !

Sell insecticides that Kill consistently

HOPKINS' Analyzed PYRETHRUM

(Extract or powder)

Made Exclusively from the CLOSED DALMATIAN PYRETHRUM FLOWERS

Open or half-open insect flowers necessarily lose part of their active principles through the action of the elements.

To assure yourself of pyrethrum with the highest, consistent run of killing activity, specify HOPKINS' PYRETHRUM PRODUCTS. They are made, unvaryingly, from the highest-testing Dalmatian Flowers only.

We are in position to give you interesting quotations, either for contract or immediate delivery.

Also—Quotations on Derris Root

HOPKINS'
(Oven Dried)
RED-RAT-SQUILL
Physiologically Tested

We are prepared to supply red squill of a toxic quality which consistently surpasses the fatal-dose standard commonly accepted. Laboratory tested, Hopkins' red squill assures the maximum of uniformity.

As the poison SPECIFIC TO RATS AND MICE, red squill is absolutely harmless to human beings or domestic animals.

Sold in bulk. Quotations and descriptive folder gladly sent.

J. L. HOPKINS & CO. 135 William St., New York

Importers, Manufacturers, Distributors of Analyzed and Standardized Crude Drugs

Say you saw it in SOAP!

method, particularly in growing the culture, inasmuch as the resistance of the culture, although transplanted daily, seems to vary at the end of a four weeks' period and then has to be readjusted to normal conditions.

Repeatedly your committee has presented to you in great detail and with much emphasis, the rules laid down by the Food & Drug Administration of the United States Department of Agriculture, for the labeling of our disinfecting products, which come under its jurisdiction, and we have endeavored to enlighten you, where the Hygienic Laboratory Phenol Coefficient Method and the Rideal-Walker Method are permissible, and yet some manufacturers inside and outside the Association, seem still to be very hazy on this subject.

I will only very briefly recapitulate former statements: For marketing coal tar disinfectants, either the Hygienic Laboratory Phenol Coefficient Method or the American Rideal-Walker Method can be used in the U.S.A., and both methods give approximately the same coefficiency results. For export, however, Washington permits the use of the original English Rideal-Walker Method in order to put our manufacturers at par with British competitors in foreign markets.

For disinfectants, however, such as pine products, chlorine preparations, formaldehyde preparations, or any other chemical disinfectant not related to phenol, the manufacturer, in domestic commerce, must state the coefficient by the American Rideal-Walker Method and cannot use the Hygienic Laboratory Phenol Coefficient Method, because the results by the first named method show lower results and are more in accord with actual practical conditions owing to a larger percentage of organic matter present. This is a tangible proof that the original Rideal-Walker Method gives fictitiously high results.

In spite of the fact that the English Rideal-Walker Method is still favored by a great number of our disinfectant manufacturers, because the results obtained are apparently high, scientific government departments in British Colonies have prohibited its use and in its place adopted the Hygienic Laboratory Phenol Coefficient Method, as you will see from the following facts:

The Agricultural Pest Control Act of 1927 of the Dominion of Canada Department of Agriculture at Ottawa, Section 9, referring to guaranteed analyses, has just lately been amended to read as follows:

"(g) For Disinfectants

In the case of phenols, lysol and similar poisons the phenol coefficient as determined by the Hygienic Laboratory Method shall be stated."

whereas formerly the Rideal-Walker Method was accepted.

In our last year's report presented to you at the annual meeting, we mentioned that the Food & Drug Administration of the United States Department of Agriculture is objecting to the method which manufacturers are using in stating the coefficients of their disinfectants on a sliding scale. In that report, we fully agreed with the views of the Department in Washington, but felt that a one unit sliding scale of coefficient, seemed a reasonable statement on scientific grounds.

However, this question still seems subject of friendly criticism in correspondence with disinfectant manufacturers by Officials of the Food and Drug Administration, and as Chairman of your Standardization Committee I would respectfully ask the official representative of the Administration attending this meeting, to give us the final ruling they reached on this subject, so that the members can act accordingly and save burdensome expense and trouble by revising labels and other literature too often.

In my Committee's report presented at the Mid-Summer meeting held in Chicago last June, which regrettably I could not attend, we pointed out that the subject for evaluating the comparative efficiency of disinfectants, germicides, and antiseptics in common use in hospitals, institutions, medical schools, etc., has been widely discussed in several scientific and medical journals, such as, the *Journal of the American Medical Association.* In reading these publications I was surprised how little these professional authors know of our continuous scientific constructive work carried on in this field, by research and otherwise, by some of the committees of our Association.

As the investigation on Nomenclature by Dr. Austen M. Patterson, Antioch College, Yellow Springs, Ohio, has been brought to a successful issue, our members now have a reliable guide to classify the proper directions for our various products, always remembering however, the rules laid down by the Government Department in Washington, and described in detail in my report of last December, whether a product is to be recommended for use on inanimate objects or for use on the animal or human body.

In concluding, I wish to emphasize that unless we disseminate the results of the scientific work by our various committees to outside channels, such as, medical journals, public health magazines and similar publications, our Association will not harvest, in due measure, the benefits of our progress.

Respectfully submitted,

W. DREYFUS, Chairman.

—o—

Report of Disinfectant Committee

By PETER DOUGAN
Merck & Company

IN making this report, the Disinfectant Committee would like to stimulate constructive criticism and discussion among the members in the disinfectant industry regarding those problems needed to be solved so as to improve our standing in the business world and increase our usefulness.

Our chief concern, as we see it, is in providing meritorious products that will give the best service to the public. To do this, it is essential that the quality of our disinfectants be maintained, and when new information and knowledge is gained, to apply it to our products so that they will have greater value and give better service. A poor product not only loses trade for itself, but weakens the confidence of a possible patron in all disinfectants.

With the steps which have been taken for an amendment to the Insecticide Act of 1910, it is hoped that every one in the disinfectant industry will agree that it is to their advantage to meet the conditions, which, we think, will help materially in raising standards. To the best of our belief, we think there is nothing which will help the industry so much in keeping off the market unreliable products as the simple plan of making it compulsory by law for every vendor of disinfectants to specify the coefficient of his product on the package.

Standards always raise that old, old question of one coefficient method as compared with a different method. We have not got together in this matter as well as we should have, for without agreeing on a concerted effort for one test, we have allowed new tests to be published, and too much effort has been spent on talking on the merits of different tests to buyers instead of talking on the desirability of using a disinfectant. We do not make profits on tests, but by selling our disinfectants.

In view of the fact that many of our members are developing trade in foreign countries, and, therefore, must meet the conditions and tests on disinfectants which the foreign buyers are familiar with, this committee offers the thought that it would be well to make a survey of the different countries and tabulate the methods of test which are used, and if possible an effort would then be made for the adoption of the test that is used by the majority throughout the world.

In short, is not the commercial aspect of the test just as vital and perhaps a bit more important too than arguing pro and con on the perfection of a test?

THIS strenuous year of 1931 has emphasized the need of frankness in discussing trade practices. At the present time, manufacturers who sell to jobbers find that there are a number of houses who are selling merchandise at prices which do not leave a satisfactory margin of profit, if any profit at all. Aside from the fact that no

(*Turn to Page* 127)

Impressions of

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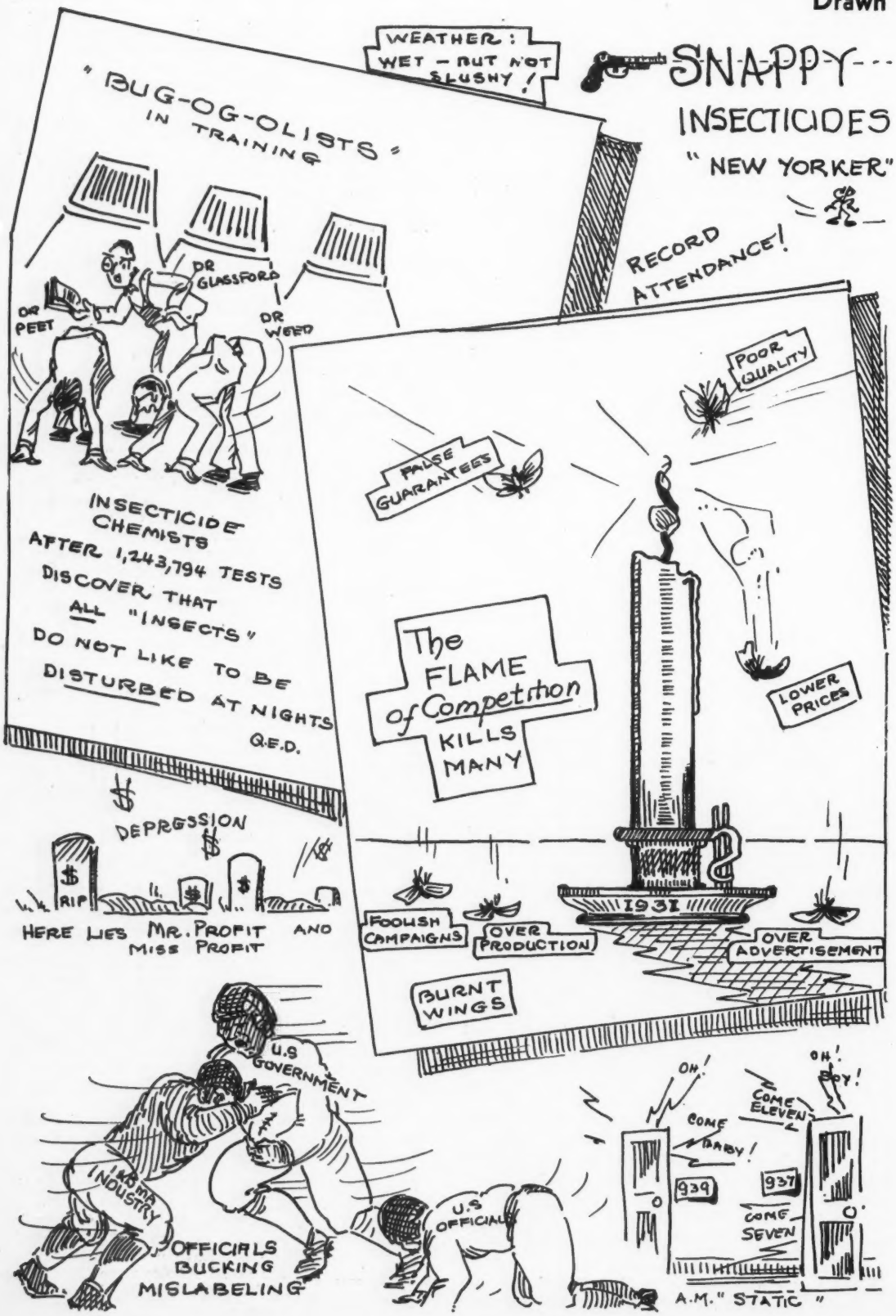
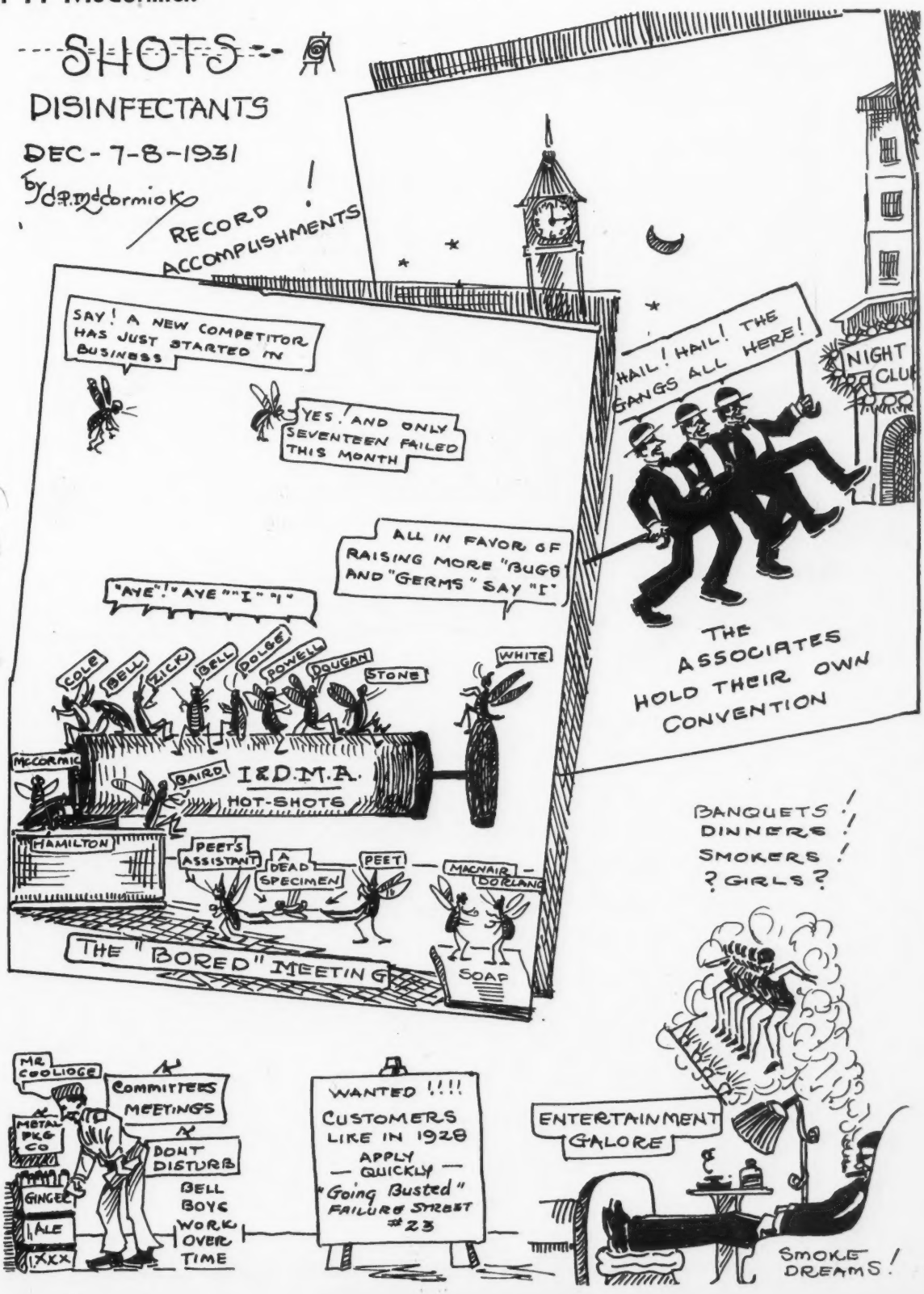


the Convention

C. P. McCormick



The SPRAYER Comes FIRST

It makes no difference how effective the insecticide or repellant may be, it MUST be correctly applied if the results are to be the BEST. The better the sprayer, the better the customer will like the product. That is the rule.

Acme Makes Sprayers to Fit Every Requirement

Over fifty years in the business has eliminated all risk and experiment in ACME products. The very height of perfection has been attained. Every sprayer carries a money-back guarantee of satisfaction. If it isn't in our regular line, we can build a sprayer to fit YOUR needs.

Our No. 200 sprayer is a leader. Special drip cup feature; air and spray tubes coordinated to produce a mist or fog that hangs in the air longer; special processed leather plunger, etc., etc. Tell us your needs. Write for samples and prices.

Potato Implement Company, Dept. 34
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LETHANE 384

The UNIFORMITY of this synthetic base aids in the production of quality insecticides at minimum cost. LETHANE 384 is manufactured under chemical control which guarantees consistent uniformity.

Röhm & Haas Co., Inc.

222 W. Washington Square

Philadelphia, Pa.

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Adopt New Fumigating and Insecticide Regulations in New York

NEW regulations, under consideration for several months past, covering fumigating and exterminating, and the packaging, handling, and sale of insecticides and allied products, have been adopted by the Board of Health of New York City. The regulations were formulated and will be enforced by the Drug Division of the Board of Health of which Dr. Edward Bocker is chief. It is understood that they were formulated in conjunction with a representative of the U. S. Public Health Service and that the Service may recommend the adoption of similar regulations by other municipalities and states throughout the country. They affect all operations carried on in New York City and all products sold in that city. Fumigating and exterminating is restricted to licensed firms and licensed operators. Sodium fluoride when and where used as an insecticide must hereafter be colored a nile blue. Numerous other restrictions in the use of poisonous, toxic, or noxious materials are included. The regulations state:

At a meeting of the Board of Health of the Department of Health of the City of New York held in the said City on the 1st day of December, 1931, the following resolutions were adopted: Resolved, That Section 104 of the Sanitary Code, be and the same is hereby amended and made to read as follows:

Section 104. Fumigants and insecticides; permits and sale regulated.

(a) No person shall in any building, vessel or other enclosed space in the city of New York use a fumigant, exterminator or insecticide for the destruction or control of insects, vermin, germs, rodents, or other pests, or engage in the business of such fumigation or extermination, without a permit issued therefor by the Board of Health or otherwise than in accordance with the terms of said permit and the regulations of said Board. This provision, however, shall not apply to a person using an exterminator or insecticide in his own home, dwelling or place of business, except that if the place of business is one where food is stored, prepared or held or kept for sale, no poisonous exterminator or insecticide may be used by such person.

The term "fumigant" shall mean and include any substance which by itself or in combination with any other substance emits or liberates a gas, fumes or vapors which gas, fumes or vapors when liberated and used for the destruction or control of insects, vermin, germs, rodents or other pests is lethal, poisonous, noxious or dangerous to human life.

The terms "exterminator" or "insecticide" as used herein shall mean and include any substance, not a fumigant, under whatever name known, used for the destruction or control of insects, vermin, germs, rodents or other pests.

There shall be five types of permits, as follows:

Fumigant Permit—To conduct the business of fumigation.

Exterminator Permit—To conduct the business of extermination.

Employee-Fumigant operator permit.

Employee-Exterminator operator permit.

Owner-Operator permit (fumigant or exterminator).

A fumigant permit entitles the holder thereof to engage in the business of fumigation and extermination and an exterminator permit entitles the holder thereof to engage only in the business of extermination.

No person holding an employee-fumigant operator permit shall engage in the occupation of fumigation and/or extermination, except in the course of employment on behalf of a holder of a fumigant permit, except that he may engage in the occupation of extermination only on behalf of a holder of an exterminator permit.

(b) No person shall sell or give away in the City of New York any poisonous substance as an exterminator or insecticide unless the container bear a label legibly and conspicuously printed with the word "Poison" and the symbol of the skull and crossbones in red ink followed with the words "Caution." This exterminator or insecticide contains (state the name of the poison), a deadly "poison" together with the antidote therefor and the name and address of the manufacturer or packer, and the words "poison," "caution" and "antidote" in block type of a larger size than the other wording, viz:

"Poison (symbol, skull and crossbones), Caution. This exterminator or insecticide contains (insert name of poison), a deadly poison. Antidote (state briefly). Manufactured (or packed) by. Name. Address."

(c) No person shall sell or give away in the City of New York any substance as an exterminator or insecticide which contains wholly or in part fluorine, its salts or compounds, or any other highly toxic ingredient, unless the container bear the following label with the caution and the antidote therefore conspicuously and legibly printed, and the words "caution" and "antidote" in block type of a larger size than the other wording, viz:

"Caution. This exterminator or insecticide contains fluorine, or name of other highly toxic ingredient) which is highly toxic and must be used with care pursuant to the following directions: (State directions). Antidote (state briefly). Manufactured (or packed) by. Name. Address."

(d) All substances in powder form sold or used as an eterminator or insecticide which contains fluorine, its salts or compounds must be distinctively colored standard nile blue as designated by the United States Bureau of Standards, and when such powdered substances are sold at retail as an exterminator or insecticide in quantities of five pounds or less, the same shall be packed in non-refillable containers.

(e) No person shall prepare or manufacture, sell, offer for sale, give away, deal in, supply, or use, or have in his or her possession with intent to sell, offer for sale, give away, deal in, supply, or use an exterminator or insecticide which contains living bacterial organisms or any culture or preparation thereof.

This Section shall take effect February 1st, 1932.

Resolved, That the following regulations governing fumigation and extermination and relating to Section 104 of the Sanitary Code, be and the same are hereby amended and made to read as follows:

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WATER SOLUBLE PERFUMES

Highly concentrated non-alcoholic products for Theatre Sprays, Liquid Deodorants, Disinfectants and other Aqueous Preparations. Four ounces or less to the gallon usually gives desired results.

A Few of Our Popular Odors

Arbutus W. S.	Lilac W. S.	Oriental 412 W. S.
Carnation W. S.	Locust W. S.	Pine W. S.
Chypre W. S.	Millefleur W. S.	Rose W. S.
Lavender W. S.	Oriental W. S.	Violet W. S.

$2.50 Per Pt. Post Paid $14.00 Per Gallon F. O. B. Irvington, N. J.

Can furnish any odor desired in Water Soluble Perfumes at prices depending on quality and strength.

also makers of a full line of Perfume Oils for LIQUID and CAKE SOAPS

Address all Correspondence to Main Office and Laboratories

E. M. Laning Company, Inc.
P. O. Box 42
433 Stuyvesant Ave. Irvington, N. J.

New York Office, 130 Pearl Street

Polishes made with Wax B964A are:

1. Non-inflammable
2. Free from solvents
3. Practically odorless
4. Free from scum and will not separate
5. Penetrating and will fill cracks and pores
6. Excellent for waterproofing materials of construction
7. Applied easily by mop, brush or spray
8. Economical because of low material and labor costs
9. Producing lustrous, durable finishes without any rubbing

Concentrated
"Rub-less" Polishes
are here.

WAX B964A is a special concentrated emulsion of Carnauba Wax and resins. It is supplied in paste form. It may be dispersed in 1-2 parts of boiling water with stirring to give rub-less polishes for cement, linoleum, marble, tile, oil-cloth, rubber, leather, wood, and compositions. When diluted with 1 part of water the highest lustre is obtained. Dilution with 2 parts of water gives a standard gloss. If slight rubbing is permitted it may be diluted farther.

These polishes are used on cement floors not only to give a gloss but to prevent dusting and makes them water-repellant. Similarly, articles made of plaster-of-Paris or the above named materials are greatly enhanced in appearance and utility.

These coatings dry to the touch in 10-20 minutes. Floors so treated are not as slippery as when waxed. Water spilled on them may be mopped up without injuring the lustre.

Price Schedule (F. O. B. New York)

440 lb. drums	40 lb. cans	8 lb. cans
18c. lb.	23c. lb.	28c. lb.

GLYCO PRODUCTS CO., Inc.
BUSH TERMINAL BLDG. No. 5 BROOKLYN, N. Y.

Regulation 1. Application for permits. Applications for a permit to conduct the business of fumigation or extermination and applications for respective employee-operator permits shall be made on blank forms furnished for such purpose by the Department of Health. All applicants must pass an examination given by the Fumigant Board as hereinafter provided. If an applicant for a permit to conduct the business of fumigation or extermination is a partnership, at least one member thereof, or if a corporation, at least one officer thereof, must pass such an examination before the respective permit is issued. When such a permit has been issued, every member of the partnership or officer of the corporation passing such examination shall receive an owner-operator-fumigant or exterminator permit, as the case may be, which entitles the holder thereof to engage as an operator in the active work of fumigation or extermination respectively. Such owner-operator permit shall be issued without fee and shall, unless revoked, expire on the same date as the permit issued to the partnership or corporation. Only those members of the partnership or officers of the corporation who have passed such an examination and received an owner-operator permit shall engage as an operator in the active work of fumigation or extermination as the case may be. Where a permit to conduct the business herein mentioned has been issued to a partnership or corporation, there must be at all times during the term of such permit a member of such partnership, and in the case of a corporation, an officer thereof who is the holder of an owner-operator permit as hereinbefore provided, otherwise, the permit to conduct such business may be revoked by the Board of Health. The application shall contain in addition to other information, the following:

(a) Name, age and address of applicant.
(b) Qualifications of applicant.
(c) If an employee, the name and address of present employer.
(d) If applicant be a corporation—
  1. Full and accurate corporate name.
  2. When and where incorporated.
  3. Name of county where certificate has been filed and date of filing.
  4. Principal place of business of corporation.
  5. Full names and addresses of officers of corporation.
  6. Name of officer or officers who are to take the examination and their qualifications.
(e) If applicant be a partnership—
  1. The names and addresses of members thereof and the names of the partners who are to take the examination and their qualifications.
(f) If applicant conducts business under a trade name, the following additional information—
  1. Complete and full trade name.
  2. The name of the person or persons doing business under such trade name.
  3. Name of county where certificate of doing business was filed, together with date of filing.

Regulation 2. Examination—Fumigant Board.

(a) Every applicant for a fumigator or exterminator permit must pass a qualification test to determine his character, training and experience.
(b) Such examination shall be conducted by a Board consisting of the Sanitary Superintendent or his assistant and two other members or employees of the Department of Health designated by the Commissioner of Health and is to be known as the "Fumigant Board." Said Board shall investigate the character, training, experience and fitness of every applicant and shall investigate any and all complaints or matters involving fumigation or extermination and report its findings and recommendations to the Board of Health.

Regulation 3. Exception Certificate. A person, firm or corporation engaged in a business which requires it to employ fumigation or extermination in connection with its own premises or its own goods, wares, and merchandise contained therein, or, in the case of a public warehouse, in connection with the premises thereof or the goods, wares and merchandise of others stored therein, may conduct fumigation or extermination upon said premises, provided, however, that an exception certificate has first been obtained by such person, firm or corporation from the Board of Health and that such fumigation or extermination shall be carried on only by the holder of an employee-fumigant-operator permit or an employee-exterminator-operator permit, as the case may be, who is in the exclusive employment of such person, firm or corporation.

Application for exception certificate shall be made on blank forms furnished for such purpose by the Board of Health and shall contain such information as may be required by said Board. There shall be no fee for such certificates.

Regulation 4. Notifications of fumigation. Every person, firm or corporation before performing fumigation in a building, vessel or other enclosed space, shall notify in writing, the Sanitary Superintendent in the Borough in which the fumigation is to be performed, the Fire Department and the local precinct of the Police Department giving the location of the building, vessel or enclosed space to be fumigated as well as its character and use, the fumigant to be used, the date and time when the fumigation will be performed. This notice must be filed with each department in the manner hereinbefore stated at least twenty-four (24) hours prior to the time set forth in the notice for such fumigation to be commenced.

No such fumigation shall be performed unless the Departments mentioned herein have been notified in accordance with the requirements of this regulation.

Regulation 5. Premises to be vacant. No building, or enclosed space shall, during the period of fumigation, be occupied by human beings. It shall be the duty of the operator to make, or cause to be made, a careful examination of all parts of such building, or enclosed space in order to verify that no human beings have remained therein, and that all necessary precautions had been undertaken to safeguard the lives and health of all persons occupying buildings adjoining that in which the fumigation is to be performed. Provided, however, where a building is continuously occupied by human beings 24 hours a day and the room or other enclosed portion of said building to be fumigated is very small in comparison to the size of the building so that the provisions of this regulation would not be practicable, then in such event upon a special written request of a holder of a fumigant permit, and after an investigation conducted by the Department of Health, it appears that such portion may be fumigated without danger to life or health, the Department may in its discretion, grant permission to the said holder of a fumigant permit to perform fumigation without requiring all persons in other parts of said building to leave same, subject to such conditions and restrictions as the Department of Health may impose.

Regulation 6. Cracks and other openings. It shall be the duty of the operator in charge of the work on the premises to be fumigated to make a personal inspection and examination of the premises, cause all cracks, crevices, openings and apertures in the walls, ceiling and floors to be properly and securely sealed in such manner as to confine the fumigant exclusively to the building, vessel or other enclosed space intended to be fumigated, and take all other practical precautions necessary to protect and safeguard the health of all persons that may in any way be affected.

Regulation 7. Crew to be removed from vessel. No vessel shall be fumigated until the Captain or other commanding officer shall have mustered the crew and caused the members thereof and all other persons therein or thereon to leave and remain away from such vessel during the process of fumigation. Provided, however, where a part of a vessel is to be fumigated and such part is not connected with or immediately adjoining an occupied por-

Finer Atomization With

THE NEW

TORNADO Compressor Type Electric Sprayer

A leader for years in the manufacture and sale of Portable Electric Sprayers, Breuer has maintained an enviable position by keeping step with the needs of the insecticide trade.

Now, the new TORNADO Model 52, illustrated, is ready for your inspection and use—greater power, finer atomization with new, positive pressure compressor construction, a beautiful custom-built job guaranteed to please your customers—complete, new design and operation—compact, self-contained, one hand unit—positively the most economical and efficient modern method for applying insecticides, disinfectants and germicides. Just the speedy, efficient, all-purpose unit you have always wanted to stimulate business.

The first manufacturer to see and use this new spray performance ordered 180 units immediately! Let us send you sample on free trial so that you too may use and inspect this unit. No obligation. Write us today for complete information.

New Features You'll Like!

1—Not a blower type incorporates a real air compressor fan unit.
2—Positive pressure compressor operation atomizes insecticides into finest smoke mist obtainable.
3—A real, self-contained, one-hand unit.
4—Compact, all aluminum construction with quart container.
5—No shoulder straps or hose to trouble.
6—Powerful ⅛ H.P. G.E. Universal Motor.
7—Weight only 4 pounds.
8—Just plug in — instant operation.
9—Fastest, finest insecticide atomization obtainable.

We also make Model 6 Tank Type and Model 50 Blower Type Sprayers —leaders for years.

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862 Blackhawk St. Chicago, Ill.

JOBBERS SELL

our products because they are right —they have been tested thoroughly both in the laboratory and in practical use.

COAL TAR DISINFECTANTS

All Coefficients, white emulsions, real coal tar odor, no naphthalene.

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No adulterants, all pine oil. Real pine odor. Coefficient guaranteed.

FLY SPRAY

Killing power guaranteed. No kerosene smell. Perfumed.

CRESOL COMPOUNDS

U. S. P. or Hospital grade. Passed by all laboratories — governmental and municipal.

SCRUBBING SOAPS

Pine or plain. Neutral vegetable oil—potash.

SOLUBLE WAX

Tested against all brands and found superior.

SPECIAL PRODUCTS

We have worked out many special items for individual jobbers which we make for them exclusively. Consult us.

The Above Products

are producing sales and repeating. Why not investigate? Write to us—

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tion of the vessel, and where after an investigation conducted by the Department of Health, it appears to the satisfaction of the Sanitary Superintendent of such department that such portion may be fumigated without danger to life, or health, he may, in his discretion, grant permission to the holder of a permit to perform fumigation without requiring all persons in other parts of such vessel to leave the same subject to such conditions and restrictions as he may impose.

Regulation 8. Materials and operator. The materials and apparatus used in fumigating shall be placed in the room or rooms to be fumigated after all openings, except the one used for entry and exit of the operator, are properly sealed. The operator placing or liberating the fumigant chemicals or gas or material shall be properly protected and safeguarded by a suitable, properly tested mask and gloves. He alone shall be allowed in the room or rooms to be fumigated during the placing of the chemicals, gas or materials, after fumigation is completed and until the premises are properly ventilated and made safe for occupancy.

Regulation 9. Danger signs. Prior to the fumigation suitable warning signs shall be posted on all doors or entrances to the premises to be fumigated, and upon all gangplanks, ladders, etc., from the dock, pier or land to the vessel, as follows:

"Danger (Crossbones and skull on both sides). Fumigated with (state name of chemical or gas). Deadly poison—highly toxic. All persons are warned to keep away. Name of Fumigator. Address. Operator in charge."

Such signs shall be printed in red ink on white cardboard, letters to be at least two (2) inches in size. At night such signs shall be illuminated so as to make the reading matter thereon plainly legible.

Regulation 10. Notice to Occupants. Notice of warning as hereinafter mentioned must be served two (2) hours in advance of any fumigation upon the occupants of the building, vessel or other space by leaving same with a responsible person therein and if not present by attaching same in a conspicuous manner on the entrance door to such apartment, room or other space occupied by a human person. Said notice shall state the premises or other enclosed space or part thereof that is to be fumigated, the date and time of fumigation, the name and address of the person or firm or corporation conducting the fumigation and the name of the operator in charge, together with a danger warning to the fact that the premises so occupied must be vacated within an hour of the time the fumigation is to commence, and not to be re-entered until the hour mentioned in said notice, and all other practical warnings that may be advisable under the circumstances.

Regulation 11. Watchman. During the period the fumigation is in process, a capable, alert, watchman or watchmen shall remain on duty at the entrance or entrances to the building, vessel, or enclosed space fumigated and until after the fumigation is completed and until the premises are properly ventilated and again safe for human occupancy.

Regulation 12. Special room, vault or tank. Every special room, vault, or tank maintained by a holder of a fumigant permit, or a fumigant exception certificate at his place of business for the purpose of fumigating articles, must be approved by the Fumigant Board as to the construction, location and ventilation. All such special rooms, vaults, or tanks must be gas-tight and periodically tested and inspected and all proper precautions must be made for the airing of such special rooms, vaults, or tanks, so as to allow for the evacuation of the fumigant without endangering life or health. A suitable warning notice with the word "Danger" in large type must be securely attached to every door or other entrance to said vault.

No watchman and no notice as required in these regulations shall be necessary when fumigation is conducted in such approved special room, vault or tank, but all other precautionary measures must be taken.

Regulation 13. Apprentice certificate. No person shall work and no employer shall engage or allow or permit such person to work as a helper or an apprentice to a fumigator or exterminator operator unless he is a holder of an apprentice certificate. Before an apprentice is engaged an application must be filed by the employer for an apprentice certificate signed by the apprentice and countersigned by said employer. No such apprentice holding such certificate shall engage in any part of the work of fumigation or extermination as the case may be except in the presence and under the constant direction and supervision of a licensed operator. Such apprentice certificate shall expire 90 days after date of issuance unless employment is sooner terminated or the certificate is otherwise revoked by the Board of Health.

BERNARD F. PLUNKETT,
Secretary.

—o—

Kasper G. Schmidt, president of O-Cedar Mop Co., died of heart disease, November 15, in Chicago. He was only thirty-four years old at the time of his death.

—o—

Advertising of the insect powder of Black Flag Co., Baltimore, has been turned over to Batten, Barton, Durstine & Osborn, Inc., New York.

—o—

W. D. Canaday, vice-president of Lehn & Fink Co., died of heart disease, November 15, in Chi- advertising and merchandising before the November 19th meeting of the Drug, Chemical and Allied Trades Section of the New York Board of Trade, which was held at the Drug & Chemical Club.

—o—

Frederick M. Moss has succeeded C. Luckey Bowman in charge of operations of Stanco, Inc., a subsidiary of Standard Oil Co. of N. J. Mr. Bowman resigned recently as general manager and vice-president of Stanco, and has severed all connection with the company.

—o—

David P. Smith has been made president of Dethol Manufacturing Co., Baltimore, H. Clarke & Sons, previously sales agents in certain territories, will act under a new arrangement as general salesmanagers. An advertising campaign which will be handled by J. Irvin Strain, Inc., Baltimore agents, is now in the course of preparation.

—o—

G. H. Wood & Co., Ltd., Toronto and Montreal, Canada, have recently published a well-printed thirty-two page catalog describing the sanitary products supplied by the company to Canadian users. The company, which eight years ago was a small manufacturer's agency is today one of the largest Canadian manufacturers of sanitary products. Its line includes liquid soap, dispensers, deodorizing blocks, disinfectant, insecticide, waxes, etc. Geoffrey H. Wood is president and general manager and H. Howard McDonald is secretary-treasurer of the company.

MERCK'S CHEMICALS . . .

Works of Merck & Co. Inc. at Rahway, N. J.

are made on a large scale

are sold at prices based on large-scale production

are regarded as standard by leading insecticide and disinfectant mfrs.

PARADICHLORBENZENE
CARBON DISULPHIDE
SODIUM FLUORIDE
CARBOLIC ACID
CARBON TETRACHLORIDE
STRYCHNINE
CRESOL U.S.P.
CORROSIVE SUBLIMATE

Methyl Salicylate

The one widely accepted odor for fly sprays—tested, tried and approved by leading manufacturers. Fresh and aromatic—pleasant to human beings, yet it does not attract insects like some of the sweeter floral essences. Merck's Methyl Salicylate is manufactured on a large scale and conforms to all U.S.P. standards. Write or 'phone our nearest office for quotations or trial order.

MERCK & CO. Inc.

MANUFACTURING CHEMISTS

161 Sixth Avenue New York — Rahway, N. J. — 4528 So. Broadway St. Louis

INDUSTRIAL DIVISION: 916 PARRISH STREET, PHILADELPHIA

Canadian Works: MERCK & CO. LTD., Montreal

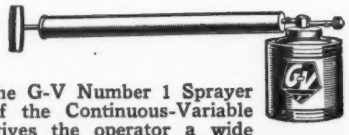
An Announcement

To better serve our customers in the insecticide field we have acquired the hand sprayer division of the G-V Sprayer Company of Lebanon, Tenn., and Wichita, Kansas, and have combined this division with our power division at South Bend.

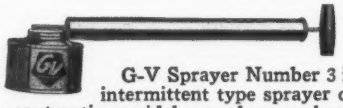
G-V hand sprayers are so well and widely known as a quality product by users of liquid insecticides that it is hardly necessary to say more than that this high standard will be maintained.

This consolidation offers the industry a logical source of supply for sprayers ranging from small, low priced hand sprayers for household use up to power equipment of the largest capacity. There are 14 different models, one of which will exactly meet your requirements.

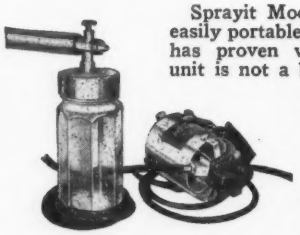
A Sprayer For Every Purpose » » » »



This is the G-V Number 1 Sprayer which is of the Continuous-Variable type. It gives the operator a wide choice of spray ranging from a needle like stream to a complete fog as desired. Particularly popular with exterminating concerns and quantity users.



G-V Sprayer Number 3 is a lower priced intermittent type sprayer of simple, sturdy construction widely used as a household sprayer. All Model G-V sprayers are furnished in either tin or brass, as service dictates.



Sprayit Model 70 is a compact, easily portable electric sprayer that has proven very popular. This unit is not a blower fan type. It incorporates a positive air compressor which means real atomization, greater operating ease, faster application and better all around satisfaction.

SEND FOR CATALOG

The Electric Sprayit Co.

South Bend, Indiana

Convention Report

(*From Page* 117)

house can stay in business if it does not sell its goods at a profit, those who are now slashing prices, face the difficult readjustment problem when it becomes necessary to restore full prices because of increases in the costs of raw materials. Another factor should also be considered and that is that the price of a product can get so low as to destroy the confidence of buyers in the value of the product itself and thus the outlet for the sale of the goods will disappear.

Another practice which the Committee is called upon to place before you is the error of some manufacturers of raw materials, such as creosote, cresylic acid, etc., which they sell to the disinfecting trade, and which in turn they use for manufacturing disinfectants that are offered in competition with the products made by their customers, or with other disinfectant manufacturers either in the open market or on specification bids.

Discounts allowed by sellers have also been spoken of, it being pointed out that in some instances such discounts mean nothing else but selling a given article at a loss for the purpose of selling another at a profit sufficient to cover both. This plan of discounts is certainly misleading to the purchaser and in the end is economically unsound.

In bringing these matters to the attention of the Association, the Disinfectant Committee does not feel that it is authorized to take any action except at the direction and under the instructions of the Association. They are here brought to your notice for discussion and decision on the action and manner in which the questions should be handled.

At this morning session Evans E. A. Stone reported for the sodium fluoride committee, and there was an extended floor discussion of the newly adopted ordinance of the New York City Department of Public Health. Copies of the ordinance were available at the meeting through the courtesy of Dr. Edward Bocker, of the Department.

Two addresses opened the Tuesday afternoon program, one by Robert W. Belcher, U. S. Chamber of Commerce, on the topic, "Opportunities Ahead," and a second by W. F. L. Tuttle, *Groceries* on recent developments in the private brand situation in the chain store market. A number of committee reports completed the program.

Report of Committee on Moth Proofing Materials

By R. E. STURHAHN
Monsanto Chemical Works

THE first report of this committee was read at the Chicago meeting of the Association last June. At that time the extent of the market for insecticides used in the control of clothes moths was described and some of the factors operating against the normal growth of this business were discussed. The report of your Committee at this time will be quite short, as it is felt this subject is of more timely interest during the summer months and best suited for discussion at the June meeting of the Association.

Members of the Committee have been asked individually whether they thought there had been any outstanding developments in the sale of moth fumigants during the past six months. It is felt that some progress has been made in the elimination of extravagant claims by some few manufacturers, particularly on labels, and that on the whole next season there will be greater care used in the wording of directions and advertising. Constructive efforts by the U. S. Department of Agriculture as well as by manufacturers of basic chemicals have done a great deal toward improving this situation.

The general opinion of the Committee is that the total sale of moth-proofing products will show an increase this year over last. People naturally take more care of their clothing when business is poor and money is scarce. Those who have expensive tapestries and carpets are more conscious of the value of these materials and take extra precautions to guard them against the ravages of moths.

Prices of moth-proofing products have been lower, but even so, this branch of the insecticide industry has been relatively little affected.

The future looks bright, but—larger sales will depend upon how extensively the public is made to realize that moth damage can be reduced or eliminated by the intelligent application of good moth-proofing products. There is a tendency to swing toward specialties in the way of fancy packages, unusual mixtures, etc., but an attractive package alone is not sufficient to build up this greater sales volume. Advertising the package properly is even more important. As one of our members puts it: "Printer's ink is one of the most valuable ingredients for any moth-proofing material. But they should be compounded carefully, first by a chemist and then by a publicity man."

Of possible interest to firms marketing moth fumigants is Farmers Bulletin No. 1655 published by the Department of Agriculture this year, entitled "The Control of Moths in Upholstered Furniture." This describes the moths' attack upon woolen covers and the use of remedial measures with special reference to paradichlorbenzene and naphthalene.

Your committee will be glad to have from the members of the Association suggestions and recommendations as to which phases of this moth-proofing subject are of most interest and what in particular should be brought out in our summer meeting.

Members of Committee,
R. E. STURHAHN, Chairman,
H. W. HAMILTON,
MELVILLE KEIM,
J. A. CAVANAGH,
A. L. FELDMAN,
E. J. REEFER,
D. W. TANENBAUM.

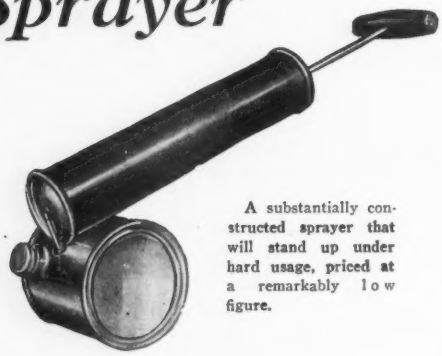
Report of Committee on Liquid Soap Standards

By DUDLEY J. BACHRACH
Clifton Chemical Co.

LIQUID Soap is the name commonly given to the soap solution used in lavatories for washing. Much has been said regarding the quality standard of this particular grade of soap, and there is very little new of interest to add at the present time. The committee instead, now, respectfully directs the attention of the association to a more recent industrial type of liquid soap; namely, to the various types of pine cleansers now being marketed. These are solutions, viscous or otherwise, of vegetable oil potash soaps and pine oil, with or without the addition of other chemicals such as phosphates, silicates, etc. They combine the detergent action of soap with the solvent and grease removing action of pine oil. These products are becoming increasingly popular for the reason that they are mild in action, easy to use in the porter's pail and tend to preserve the new types of composition flooring.

Some minimum standard seems desirable for this product, so that the evils which arose at the inception of the liquid hand soap industry do not creep in with this new

VOGEL
Insecticide Sprayer



A substantially constructed sprayer that will stand up under hard usage, priced at a remarkably low figure.

Hand and continuous sprayers, designed and manufactured to give the greatest value for the least outlay.

Also Manufacturers of

Shaker Top Cans
for paradichlorbenzene crystals

Plain or Decorated

Tin Cans
for Pastes, Soft Soaps,
Dry and Liquid Insecticides

Holders for Deodorizing Blocks

Write us about your requirements and we will gladly submit samples and prices without any obligation on your part.

William Vogel & Bros.
Incorporated
"IN BUSINESS OVER 50 YEARS"
37-47 South 9th Street
Brooklyn, N. Y.

If you color
you will be interested in
PYLAM FAST COLORS

We offer a full line for Disinfectants, Deodorants, Liquid Soaps, Polishes, Waxes, Floor Oils and Emulsions.

● Pylakrome Oil Colors
fast to light, alkali, tin; soluble in all vegetable, animal and mineral oils, and waxes and organic solvents. Recommended for waxes, polishes, creams, emulsions and floor oils.

418 Olive Green	410 Orange	1112-RR Violet
430 Blue Green	420 Red	130 Mahogany
408 Yellow	416-G Blue	119 Walnut

- **PINK S-336 for Metal Polish, a desirable shade that will not fade in storage or when exposed.**
- **PYLA-NAP GREEN for liquid Soap. Especially made for this purpose. Fast to light alkali and tin.**
- **BLACK S-342 for Soaps and Emulsions. Fast to light, acid and alkali and tin. Water soluble.**
- **BLACK 204 for Waxes and Polishes, Dressings and Emulsions. Fast to alkali and tin. Good fastness to light.**
- **GREEN S-348 for Disinfectants. Water soluble. Fast to Cresylic and Phenol Compounds.**

Send for free samples.
Send for complete price list.

PYLAM PRODUCTS CO.
Manufacturing Chemists—Importers—Exporters
53 PARK PLACE NEW YORK, N. Y.

form of cleaner. A suggested minimum standard follows:

Pine Cleanser

DESCRIPTION: A clear solution of pure vegetable oil saponified with caustic potash combined with pure steam distilled pine oil. The finished product should pour with reasonable ease at a temperature of 40 degrees Fahrenheit. When it is poured in hot water, there should develop a strong odor of pine oil.

While the respective proportions of pure oil soap and pine oil may be varied to suit each manufacturer, the finished product should contain not less than 18 per cent total of vegetable oil potash soap plus pine oil plus glycerine of saponification. The percentage of pine oil present in the mixture shall not be less than 3 per cent nor shall the percentage of caustic alkali exceed .1 per cent. Any additional chemicals that may be added should be in addition to the soap and pine oil contents.

It is expressly recommended that no commercial fatty acids, off color vegetable oils nor grades of pine oil other than standard steam distilled be used. No rosin oil or rosin soap should be present. As a further check on the purity of the material used, the color of the finished product should be no darker than the color standard of pure raw soya bean oil; namely, (reference—Gardner Paints & Varnishes) nor be darker than a freshly prepared solution containing 1 gram of Potassium Bichromate, in 100 cc. of pure sulphuric acid, having a specific gravity of 1.84.

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Report of Committee on Insecticides

By C. P. MCCORMICK
McCormick & Company

A BUILDING about to be constructed must be dreamed by someone before being put on paper. The architect may draw beautiful plans that are pleasing to the eye, but it is advisable for the engineer to check his work before proceeding with actual building. The blueprints are changed many times and sometimes the building is changed so many times while under construction that it is almost beyond recognition when completed. Eventually, however, it is created and it is safe, sound and yet beautiful in appearance. So it is with the Report of the Committee on Insecticides. We have dreamed certain ideas and have transcribed them in black and white and now it is up to you to reject, criticize or improve them until something material may be gained from them, taking for granted that we are building a structure:

1. *Clearing Plan.* Basically, the first problem is to clear the ground entirely of any debris or obstruction. What is Pyrethrum Extract? Let's try to define it. We suggest the following definition, for want of a better one:

> "Pyrethrum extract is an extract prepared from pyrethrum flowers with the aid of a petroleum oil or other suitable solvent with or without harmless, odorous materials and contains in 100 cc. the active principles of not less than 9 grams of pyrethrum flowers. (This is equivalent to 12 ounces avoirdupois per gallon.)"

2. *Excavation Plan.* The next important step is to excavate your building site for laying of a permanent foundation. We suggest furthermore a Government Standard to be decided only after we determine the proper methods of judging the efficiency of an insecticide. The Standardization Committee has worked with us on this report. Let's not destroy the suggested standard until a better one is proposed. What standard should there be for household sprays, whether consisting of pyrethrum or not? The temporary answer to this is suggested as follows:

> "Household insecticide spray is a solution in oil or other suitable solvent of an insecticide or insecticides, harmless to warm-blooded animals, with or without harmless, odorous materials and having an insecticidal toxicity equal to that of pyrethrum extract."

. . . . . .

cut your perfuming costs . . . . *in half!*

for your

Sprays
Polishes
Waxes
Oils
Cleaning Fluids
by using
VIOFLOR

. . . . . .

YOU do not have to change any characteristic odor effect you may have established in your finished product. You merely use from 40% to 70% less of your present perfume in combination with VIOFLOR. If you have no established odor effect, VIOFLOR may be used alone most effectively and economically.

This saving is simple and practical.
Let us demonstrate.

Manufactured by
Crepin & Doumin, Ltd., London, England

Sold in the United States and Canada by
JOHN POWELL & CO., INC.
114 E. 32nd St., New York, N. Y.

Say you saw it in SOAP!

VOGEL
Insecticide Sprayer

A substantially constructed sprayer that will stand up under hard usage, priced at a remarkably low figure.

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Manufactured by
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114 E. 32nd St., New York, N. Y.

Say you saw it in SOAP!

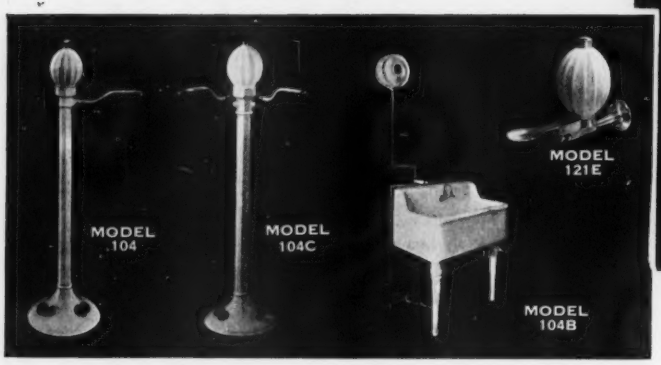
SOAPERIOR DISPENSERS *sell* because they are fool-proof. They are strong and retain their attractiveness and usefulness thru years of use. All working parts are precision tooled to guard against leakage and our engineers have ingeniously simplified their mechanism to insure perfect operation.

There is a **SOAPERIOR DISPENSER** to meet every need . . . Gravity Feed Type (consisting of fool-proof Hexagon Valves—cross-section shown) and handsome tanks (two types pictured) installed at an elevation and serving any number of basins.

Also Hospital Equipment (4 models shown) and Individual Dispensers of every type (2 illustrated) . . . some built for heavy duty . . . others priced so low you can give them away to your trade with soap orders. Also Powdered Soap Dispensers.

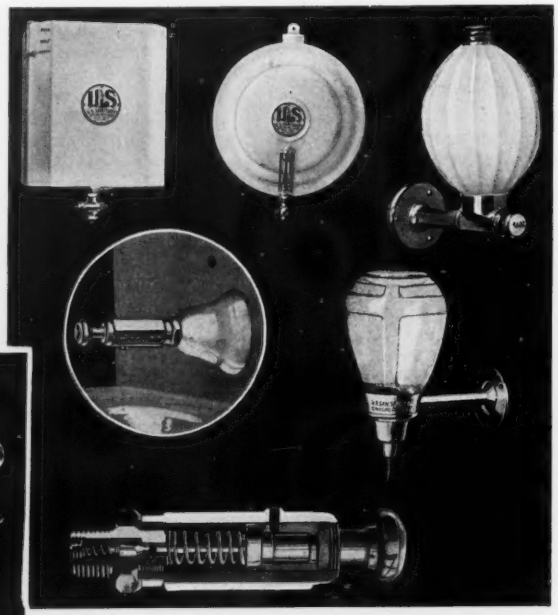
Send for catalog and price list.

HOSPITAL SOAP EQUIPMENT



SOAPERIOR

LIQUID SOAP EQUIPMENT



U. S. SANITARY SPECIALTIES CORPORATION

435 SO. WESTERN AVE. CHICAGO, ILL.

LOWELL *LOWELL*

the perfect insecticide sprayer for 1932

LOWELL NU DAY

Carefully made and proportioned to produce complete vaporization of the solution which is the prime essential for proper application of household insecticides. Dripless at any angle. Heavy tin. Capacity about one pint.

The Atlas Nu Day is a full pint capacity sprayer offering all the dripless, siphonless and complete vaporization features of the Lowell Nu Day.

LOWELL SPRAYER COMPANY

LOWELL, MICH.

Quality Sprayers Backed by 30 Years' Sprayer Building Experience.

---

3. *Concrete Foundation Plan.* Having worked out the first two plans roughly, we suggest a simpler plan for actual testing sprays upon insects and Dr. Badertscher of McCormick & Co. and Dr. Peet have been working on a smaller death chamber method and will report to you at this convention. The Committee feels that the construction of a modified death chamber which is smaller than the chamber used by the Peet-Grady method should be as small as possible to make the experiment satisfactory and yet more economical to handle. This problem will greatly assist us in improving the quality of insecticides as a whole if all of the insecticide manufacturers have a definite, inexpensive method for testing their own product. The Committee believes that many are placing poor insecticides on the market through ignorance.

4. *Structural Steel Plan.* It is the steel work in a concrete building which gives it stability, flexibility and strength. We therefore suggest that the Association encourage quality insecticides and discourage poor quality merchandise by thinking it, talking it and selling it. We hope the Standardization Committee may help us out considerably by giving definite material as to how products may be improved.

5. *Floor Plan.* The building now looming against the sky has become an actuality and we feel that the floor plans might be translated into our picture as manufacturing, advertising, merchandising and selling problems. Your Committee has undertaken a massive problem in making a survey of about one hundred leading cities in the United States and the results are hereby given for your information and thought. We must remember that even the architect and engineer are often wrong after checking each other and some of these replies may alter the picture and may be wrong, but in general the survey must be right, for it is the opinion of our customers that we are giving and not personal opinions:

A. Roughly 100 cities were covered and the population represented was close to 75 per cent of the country, families likewise in proportion.

B. It is hard to tell how many dealers were actually contacted because this survey is that of combined effort, the newspapers being one of the investigators. This year at the mid-year meeting, you were given the leading criticisms of dealers buying insecticides. They were in order, namely, *objectionable odor, inefficient insecticides, high prices, too little advertising.* At that time only thirty cities had been surveyed, but the same complaints were in the lead after the survey had been finished. The Committee feels confident since the last report that special effort has been made by several manufacturers to eliminate any objectionable odor and to improve their product. Others have greatly improved the toxicity of their insecticides and we know of the downward trend of prices of insecticides since the meeting, but we question whether the additional advertising will be taken as seriously as the first three criticisms during the coming year. The Committee does not believe that the June report was responsible for the improvement of these complaints in the industry, but feels that bringing them to light might have helped somewhat.

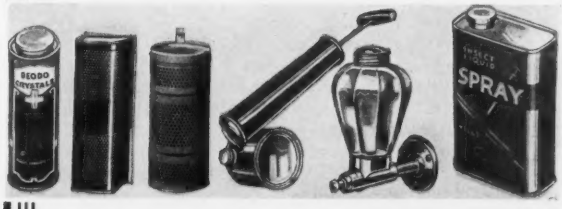
C. We find that newspapers lead in apparent pulling power as far as dealers are concerned, by a five to one majority over the next medium—Radio. Radio being second best was well ahead of window display which is considered the third best advertising medium. All of the rest do not equal one half the number of votes that even the window display received. We mention the least desired advertising mediums in sequence; demonstration, booklet, special price, house to house canvassing, magazine, handbill and street car.

D. There was a two to one majority vote that combination packages were not looked upon with favor. However, the vote was large enough to show that a great number like the combination package.

E. A four to three majority stated they maintain manufacturer's suggested resale price.

F. A great many jobbers complained regarding the foolishness of deals, yet our customers vote more than two to one in favor of deals and the purchase of same.

Packages are IMPORTANT!



OF COURSE

BUT

Have you ever tried to sell a spray, liquid soap, para block or disinfectant without a perfume? It may be possible but not probable.

Insure the sale of your products by adopting odors that please and repeat. We recommend—

For Fly Sprays

Oil Bouquet BLS MM&R
Oil Bouquet New Mown Hay MM&R
Oil Sensation Bouquet MM&R

For Liquid Soaps

Oil Rose "N" MM&R
Oil Lilac No. 4723 MM&R
Oil Colonial Bouquet MM&R

For Para Blocks

Oil Rose "N" MM&R
Oil Lilas Blanc MM&R
Oil Oriental Bouquet MM&R

MAGNUS, MABEE & REYNARD, INC.

ESSENTIAL OILS

32 CLIFF ST.
NEW YORK, N. Y.

G. When the question of "Insect Most Prevalent" was put to those questioned, the fly was given the leading position while the mosquito, ant and roach in succession amounted to the same number of votes all together as the fly alone. Fifth on the list was the moth, while the bedbug, flea, water bug, snail and plant insects were named in the order given as the next most prevalent insects. This report was primarily on liquid insecticides and the only mention of powder was the proportion of powder sold in dollars and cents to liquid. The dealers reported a four to one purchase of liquids over powder.

H. All around insecticides. This was a five to one majority vote that they would rather have one insecticide that would kill all insects rather than a special package for moths, etc. However, in fairness to the moth repellant manufacturers, 50 per cent of the trade stated they had a sale of moth repellants.

I. The Summer months won as the best season of the year for selling insecticides by a four to one majority over the next favorable season, namely, the Fall, but it was surprising to note that the Spring was so close to the Fall season that it was almost a tie. The Winter season was reported by less than 4 per cent as a favorable season for the sale of insecticides.

We wish to apologize to you for going into detail as we possibly made it uninteresting to those of you who are not in the insecticide business and hope that this report might cause a favorable discussion on the subjects mentioned herein. The Chairman of the Committee wishes to thank each and every member of his Committee for their willingness to serve and work as a part of this report.

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Report on Insecticide Act

THE Committee wishes to report that on October 16 we received a letter from the Food and Drug Administration and as a result sought and secured an appointment with the Department. This appointment was kept on October 28 at which time the Committee went to Washington and there met with Mr. W. G. Campbell, Director of Regulatory Work, also Dr. McDonnell, and Mr. Shibley who were in attendance.

A tentative draft for the amendment to the Insecticide Act as prepared by the Solicitor's office through the helpfulness of the Food and Drug Administration was discussed concerning those sections of the Act on which there was some question of opinion. The Committee left the meeting with the understanding that they were to write a letter in regard to the principal questions involved.

During the week of November 16 the Committee had a meeting in Boston and drafted a letter which was sent to the Food and Drug Administration and which we hope will prove satisfactory to the Department.

At this time then, the Committee feels that they can make a report of progress which actually means that the question of amending the Insecticide Act is well on its way for final approval.

Respectfully submitted,

PETER DOUGAN,
C. C. BAIRD,
Committee on Amendment to the Insecticide Act.

—o—

Report of Liquid Soap Committee

By V. W. MIDER
U. S. Chemical Company

THE meeting of liquid soap manufacturers of the midwest, held in February in Chicago, has not proven itself the success which was anticipated by virtue of the fact that no subsequent meeting was held and the one meeting of the Committee that was scheduled, was attended by only a few members of the Committee, each of whom had pledged himself on becoming a member of the Committee at the original meeting. This failure to

(*Turn Back to Page* 74)

for 33 years

Makers of
Coal Tar Disinfectants
Stock Dips
Pine Oil Disinfectants
Insecticides
Polishes
Cleansers
Liquid Soaps
Spray Products
Roofing Cements

for the Wholesale and Jobbing Trades Only

DISINFECTANTS

Pine Oil Disinfectant, H. L.
Pure Hygienic Laboratory Pine Oil Disinfectant containing 70% steam distilled pine oil. Finest quality pine disinfectant.

Pine Disinfectant Comp.
Lower cost disinfectant compound containing 40% pure steam distilled pine oil as chief active ingredient.

Pine Odor Deodorant
Non-medicinal pine odor deodorant of low cost for use in chemical closets, livery stables, kennels, etc.

Coal Tar Dip, No. 1
Coal-tar disinfectant containing 20 to 25% phenols and having a phenol coefficient by H. L. Method of 4 to 6.

Coal Tar Dip, No. 2
Lower cost coal-tar disinfectant with a phenol coefficient by the H. L. Method of 2 to 3.

Insecticide Dips
Low cost disinfectants of creosote oil base. In two grades, having phenol coefficients of approximately 2 and of 1 by H. L.

Send for samples, prices, and details.

CHEMICAL SUPPLY COMPANY
2450 Canal Road **Cleveland, O.**

Established 1898

Say you saw it in SOAP!

Form Irving Bennett & Company

Irving Bennett, formerly associated with Antoine Chiris Co., for eleven years, has announced the organization of Irving Bennett & Co., with offices at 64 West 23rd St., New York. The new company will import essential oils and aromatic chemicals and will offer a line of perfuming specialties for soaps, sanitary products, toilet preparations, etc. Branches are now being established in the middle west and on the Pacific Coast. Mr. Bennett was first connected with the Standard Chemical Co., aromatic chemical manufacturers, later taken over by Chiris. For two years, he was manager of the Chiris Canadian branch at Montreal, returning to New York to handle sales in the Eastern states and Canada.

—o—

A new floor finishing product, sold under the name *Lusterbryte* has been announced by U. S. Sanitary Specialties Corp., Chicago. It is said to dry hard with a luster in less than twenty minutes, without rubbing or polishing. It is stated that one gallon is sufficient to cover 2,000 to 3,000 square feet and that it has the added feature of permitting refinishing without showing laps.

—o—

John H. Rodriguez, well-known New York essential oil broker, died December 3rd at the New York Medical Center following an operation. He had been a figure in the industry for over forty years. His early training was with J. B. Horner and A. A. Stilwell & Co. In 1915 he joined the essential oil department of Charles L. Huisking & Co. It was not until 1922 that he entered the essential oil brokerage business for himself. At the time of his death, Mr. Rodriguez was fifty-five years of age. He is survived by his widow and a son, John H., Jr.

—o—

American Chemical Works, Covington, Ky., has been succeeded by Latonia Chemical Co., Covington.

—o—

New York Regulations

(*From Page* 109)

These regulations represent a commendable piece of work by the Board of Health, especially for the intelligent and painstaking manner in which they were drawn, something so frequently lacking in the work of regulatory bodies. There is a very distinct possibility that these regulations may be the model for others to be adopted by various municipal and state authorities about the country. It is to the advantage of the industry as a whole to familiarize itself with them.

A FORMULA

A definite formula is followed in the designing of Hudson Sprayers. This formula involves the length and diameter of the pump. Another "ingredient" is the diameter and lift of the syphon tube. Still another is the gauge of the hole in the pump end. And there are many other factors.

But these are details. The important thing is that the Hudson formula was worked out largely from ideas and suggestions submitted by leading insecticide manufacturers, working in close harmony with Hudson engineers.

Such a formula, kept up to date and revised when revision means improvement, must be close to right. A sprayer, designed on that basis, for your particular insecticide, must be close to solving your problem.

H.D.HUDSON MANUFACTURING CO.

589 E. ILLINOIS ST.
CHICAGO, ILL.

New York City Minneapolis, Minn. Omaha
San Francisco Philadelphia Kansas City, Mo.

THE BEST AMMUNITION

GRANULATED OR POWDERED

PYRETHRUM

CONCENTRATED EXTRACT

Our analytical and research laboratories guarantee uniform quality and toxic value. We have specialized in Pyrethrum for almost half a century.

McCORMICK & CO., INC.
BALTIMORE, MD.

LIGHTNIN PORTABLE MIXERS

This Modern Way of Mixing SOAP Solutions

Direct-Drive Model M LIGHTNIN

. . . does not permit any variation to occur in the uniform quality of your product and helps you meet the demand for lowered production costs. That is why LIGHTNIN Mixers become daily more important to the whole soap industry. The "bottom-to-top" action illustrated here is the reason for LIGHTNIN thoroughness; LIGHTNIN speed; LIGHTNIN economy in time and labor saving. And there is a LIGHTNIN with just the size . . . power and capacity you require.

ALL SIZES AND SPEEDS

MIXING EQUIPMENT CO., INC.
Originators and Largest Manufacturers of Portable Electric Mixers

Factory: 1044 Garson Ave.
Rochester, New York

229 East 38th Street
New York City

TRISODIUM PHOSPHATE
DISODIUM PHOSPHATE

Preferred for their colorless crystals, uniform size and sparkling appearance. Prompt deliveries made from convenient distributing points. Packed in 325-pound paper-lined barrels and paper-lined kegs. Also in bags.

BOWKER
CHEMICAL COMPANY
419 Fourth Ave., New York

SOAP DIES and STAMPS

—for—
TOILET SOAPS
LAUNDRY SOAPS
BATH TABLETS
STAMPING

For Foot and Power Presses

Manufacture Backed by 35 Years' Experience

ANTHONY J. FRIES

717 Sycamore Street — Cincinnati, O., U. S. A.

CLASSIFIED ADVERTISING

Classified Advertising—All classified advertisements will be charged for at the rate of ten cents per word, $2.00 minimum, except those of individuals seeking employment where the rate is five cents per word, $1.00 minimum. Address all replies to Classified Advertisements with Box Number, care of *Soap*, 136 Liberty St., New York.

Note: All advertisements must be in publisher's hands by the first of the month for that month's issue.

Positions Wanted

Chemical Engineer, Soapmaker and factory superintendent desires position. Experienced boiled and cold made laundry soaps. Three years in Spanish speaking country. Has method for utilizing scrappings or cuttings from cold made soaps which saves fillings without injuring quality; cuts manufacturing 40% with little extra equipment. Address Box 837, care *Soap*.

Position Wanted—By refiner of corn oil. Thoroughly familiar with refining, bleaching, deodorizing operations. Capable supervising refinery. Do own analytical work. Understand structural layout and equipment. Address Box 831, care *Soap*.

Salesman—In New York, New Jersey, and Metropolitan territory, man experienced in insecticide and sanitary products field desires new connection. Address Box 840, care *Soap*.

Wax and Soap Maker—Nine years practical experience manufacturing liquid, paste and dry bright waxes, liquid and soft soaps, polishes, cleaners and disinfectants. Capable of managing production. Desires position where honest efforts are appreciated. Moderate salary. Address Box 835, care *Soap*.

Manager—Man experienced in management of soap plant both as to manufacture and selling seeks new position. Address Box 841, care *Soap*.

Superintendent—Man with twenty years' experience and fine record in manufacture of soaps, textile soaps and specialties, desires new connection as plant manager or assistant. Technical education and practical experience combined. Address Box 843, care *Soap*.

DECIDE NOW

While Prices Are Low

WITH

CONSOLIDATED REBUILT MACHINERY

SPECIALS

4—650 gal. Dopp Jacketed Kettles.
1—Houchin-1000 lb. Mixer, twin shaft.
1—Soap Chip Dryer, with chilling Rolls, 1200 lb.

1—Jones A Automatic Soap Press.
1—Ralston Automatic Soap Press, belt underneath.
1—Automatic Soap Cutting Table, belt.
1—1200 lb. Hand operated Slabber.
3—Houchin-Aiken Plodders, 4″, 8″, 10″.
1—Swenson Single Glycerine Evaporator.
1—Strunz 1200 lb. Horizontal Jacketed Crutcher.
1—Dopp 1500 lb. Jacketed Crutcher.
3—Granite 3 roll Mills, 12″ x 24″.
6—Soap Chippers, 20″, 24″, 30″.
20—Filter Presses, 12″ x 12″ to 42″ x 42″.
1—No. 0000 Raymond Pulverizer.
1—No. 4 J. B. Hammer Mill.
1—1000 gal. Day Jumbo Jacketed Mixer.
16—Horizontal Mixers, 20 gal. to 1,200 gal.
35—Dopp Jacketed, Agitated Kettles, 50 gal. to 200 gal.—with spiral, bridge and double motion agitators.
100—Steel and Cast Iron Jacketed and Agitated Kettles, 50 gal. to 5000 gal.

MISCELLANEOUS:—Soap Frames, Copper and Aluminum Jacketed Kettles, Pony Mixers, Collapsible Tube Fillers, Tanks, Mixers, Labelers, Pumps, Boilers, etc.

Send for latest Printed Bulletins.

CONSOLIDATED
PRODUCTS COMPANY, Inc.

15-21 Park Row, N. Y. C. BArclay 7—0600

We buy your idle Machinery—separate items or entire plants.

Persulphate of Ammonia
Persulphate of Potash
Caustic Potash
Caustic Soda

JOSEPH TURNER & Co.
19 CEDAR STREET
NEW YORK CITY

TRADE B MARK

Barrett Standard CHEMICALS

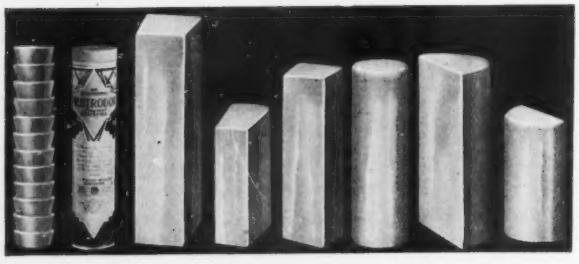
In modern soap and disinfectant manufacturing, production schedules are just as important as raw material specifications. The purest of chemicals become valuable to the manufacturer only when they are delivered and ready for use.

Superior service has always been a specification of Barrett Standard Chemicals. And a traffic department proud of the Barrett reputation makes fast, dependable service a certainty.

CRESOLS CRESYLIC ACIDS
TAR ACID OILS AMMONIAS

The Barrett Company
40 Rector Street, New York, N. Y.

WORLD'S LARGEST PRODUCERS of DEODORIZING BLOCS



OFFER YOU THEIR FAMOUS QUALITY
Under Your Private Label—

U. S. AIR CONDITIONING BLOCS outsell all other blocs because they are moulded, hard and uniformly perfumed. Sizes and shapes (as illustrated) to fit any containers. Odors to meet current needs. Packed for you under your private label.

Handsome perforated metal containers in White Enamel, Porcelain, Oxidize or Nickel-Plate with Jobbers' nameplate.

Also NEUTRODOR URINAL BLOCETTES individually wrapped in cellophane and AEROZONE DEODORIZING CRYSTALS—both packed in beautiful lithographed tins.

Also HIK BRAND—a new line of Deodorizing Blocs and Crystals priced so low that you can meet any competition.

Write for new price bulletin on Deodorizing Blocs, Liquid Soap, Soap Dispensers, etc. New catalog on request.

U. S. SANITARY SPECIALTIES CORP.
435-41 South Western Ave. Chicago, Illinois

An Ideal Cap Liner
"INERTO"
(Trade Mark Reg.)

"INERTO" is resilient—that means a good tight seal.
"INERTO" is backed by a resilient material—that means a doubly good seal.
"INERTO" actually is plastic and moulds itself to the shape of your bottle top. A thrice protected sealing medium.
"INERTO" is chemically inert! Try it on mild acids or alkalies; alcohol or witch hazel; iodine or ammonia; peroxide or bleaching solutions; hygroscopic salts or aqueous solutions.
"INERTO" is furnished in our continuous thread screw caps.
"INERTO" is another GUTMANN product—exclusively!

Ask for samples in your C. T. size

FERDINAND GUTMANN & CO.
Bush Terminal No. 19 Brooklyn, N. Y.

Bottle Closure Specialists Since 1890.

Metal Screw Caps
Saniseal Metal Milk Caps — Distilled Water Caps
Crown Corks — Special Purpose Caps
"FILMASEALS"
Trade Mark Reg. *Pats. Pending*

Say you saw it in SOAP!

Salesman—Man with experience in sale of insecticide raw materials to exterminators, manufacturers, and jobbers in New York and New Jersey area, wishes new connection. Address Box 817, care *Soap*.

Salesman—Man well acquainted in the soap and allied trades desires position where his knowledge of the field and business will be of value. Desires to handle line of soap plant equipment or raw materials for a well known house. Knows the soapmakers from coast to coast. Address Box 842, care *Soap*.

Soap Maker—A man capable of taking full charge of plant making all types of soap, including liquid and oil soaps, desires new connection. Thirty years' experience. Best references. Box 844, care *Soap*.

Soap Maker—With years of actual experience in manufacturing all grades and kinds of soaps and soap products. Address Box 845, care *Soap*.

Need Help? For all types of employes with chemical experience and training, ask us. Everybody for the chemical process industries from the president to the office boy, including office, sales, plant, laboratory, and expert advisors. Quick action. Careful selection of applicants based on full information. Any location. Bureau of Employment of the Chemists' Club (Agency), 50 E. 41st Street, New York.

Positions Open

Experienced Soap Maker wanted with thorough knowledge of filled laundry soaps, mottled soaps, and cold made soaps. Must have ability to work out new formulas and stand rigid examination as to ability in all departments of soap boiling and crutching. Write fully and in detail to Box 838, care *Soap*.

Wanted Soap Maker—Young man with some knowledge of chemistry and practical soap experience, able to carry out experimental and development work on soap products. Give full information in first letter. Box 832, care *Soap*.

Salesmen and Distributors with following for castile (USP) soap, bulk or packaged. Commission. State territory and classes of buyers covered. Address Box 833, care *Soap*.

Soap Maker—Thoroughly experienced to make castile soap and shampoo. Permanent position to right man. Address Box 834, care *Soap*.

SOAP MACHINERY BARGAINS

SPECIALS

1—Proctor 4 fan Automatic Soap Chip Dryer.
1—Sargent 3 fan Soap Chip Dryer.
4—Steel watercooled Roller Mills, 9x24", 9x30", 12x30", 16x40".
1—Houchin-Aiken 8" Jumbo Plodder.
1—Houchin-Aiken Para Block Press.
20—Standard 1200 lb. Soap Frames.
6—Mulford & Richards Para Block Presses.

1—Soap Chip Dryer, with Chilling Rolls, 1500 lbs. capacity.
3—Dopp & Houchin Vert. 1500 and 3000 lb. Crutchers.
5—Foot Presses for Soaps and Deodorizing Blocks.
2—Jones & Ralston Automatic Presses.
8—Dopp Kettles, Open and Closed.
1—Ernest Scott Glycerine single effect Evaporator, complete with vacuum pumps.
8—Cast Iron 12, 18, 24, 30, 36 inches square, Shriver and Sperry Filter Presses.
50—600 and 1200 lbs. capacity Frames.
2—3 roll Huber and H. A. Stone Mills.
1—4 roll Rutchman Stone Mill.
4—Nos. 1, 2 and 3 Meade Mills.
1—10A Blanchard Mill.
4—6", 8" and 10" Single and Twin Screw Plodders.
2—Broughton Mixers.
1—American Soap Wrapping Machine.
2—Slabbers, 600 and 1200 lbs. Hand and Power Driven.
10—Rotary Soap Pumps—1 to 4 inches.

Blowers—Exhaust Fans—Engines—Steel and Wood Tanks—Pumps—Storage Tanks—Motors—Conveyors—Elevators—Copper, Aluminum and Iron Kettles—Etc.

Send for Complete List!
We buy and sell from single items to complete plants

STEIN-BRILL CORP.

25 Church Street **New York City**

PHONE! Cable Address: "BRISTEN" **WRITE!**

Phones—BArclay 7—4850-1-2

Agents for RODGERS
PASTE and POWDER FILLERS
CLOSERS and CRIMPERS
TUBE CLIPS — CONVEYOR TABLES
Send for Illustrated Catalog

INCREASE SALES!

by packaging or shipping your Products in

CIN-MADE

FIBRE CANS and TUBES

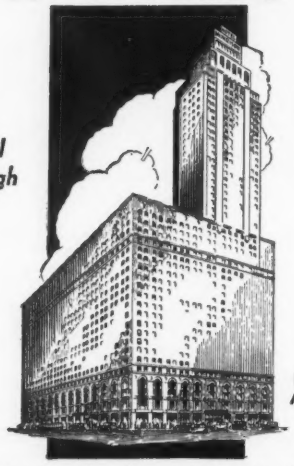
Samples and quotations gladly furnished.

THE CINCINNATI MAILING DEVICE COMPANY

294 EGGLESTON AVE.
CINCINNATI, OHIO

IN CHICAGO

World's Tallest Hotel 46 Stories High



LEONARD HICKS
Managing Director

The extra attention given to the needs of guests will favorably impress you. Nearest to stores, offices, theatres and railroad stations. Each guest room is outside with bath, circulating ice water, bed-head reading lamp and Servidor. Housekeeper on each floor. Garage facilities.

2500 ROOMS $3.00 UP

MORRISON HOTEL

Madison and Clark Streets CHICAGO

Are You Listed in the SOAP BLUE BOOK?

THE 1932 Edition of the **Soap Blue Book** is now being prepared. If you sell anything to readers of **Soap** you should be properly listed. Have you filled out a questionnaire? If not send for one now. No charge for listings.

The **Soap Blue Book** lists sources of supply for everything readers of **Soap** buy—raw materials, containers, machinery, bulk and private brand products, etc.

MACNAIR-DORLAND CO., INC., Publishers
136 LIBERTY STREET, NEW YORK

Say you saw it in SOAP!

Soapmaker—Practical soap chemist with full knowledge of liquid and oil soaps and disinfectants, for medium size plant in Middle West. State age, experience, and salary expected in your first letter. Address Box 846, care *Soap.*

Wanted—A fast growing soap manufacturer in the Middle West has an opening in its organization for a mechanical engineer to take complete charge of mechanical equipment in plant. This man must have a number of years experience in the soap plant. Address Box 847, care *Soap.*

Miscellaneous

Manufacturer's Agent—Man with following in chemical and associated fields desires to take over manufacturer's sales agency in New York and Metropolitan territory. Must be products of merit and well-established company. Highest type representation assured. Communicate with Box No. 836, care *Soap.*

For Sale—Small shampoo business with trade mark and some stock for sale. Write for details and sample of product. Box 839, care *Soap.*

For Sale—Foot press fully equipped to stamp one ounce cakes, together with packing boxes, trade name, extra four ounce die. Address Box 849, care *Soap.*

Chemicals Jobber wants additions to his line of Chemicals, Chemical Specialties, etc. Answer in detail. Address Box 850, care *Soap.*

For Sale—Pumacite or volcanic ash, milled and sized to any degree of fineness desired. It is very white and of exceptional quality. We can supply any demand at attractive prices. Low freight rate to seacoast points. Samples and particulars sent on request. Acme Silica Corp., Ltd., Room 366, Habersfeld building, Bakersfield, Calif.

Formulas and expert advice. I will revise your process, work out processes for new products, install and put into operation new equipment. Expert in all kinds of soaps, liquid soaps, scrub soaps, mottled and artificial mottled soaps, etc. Many years' experienced in field. Have at my disposal formulas of late J. A. Kyle who for 35 years was connected with several of the largest American soap manufacturers. W. E. Wilkinson, 174 Vreeland Avenue, Rutherford, N. J., or western agents, A. E. Starkie & Co., 1 No. Crawford Avenue, Chicago.

We Manufacture
For The Trade ONLY

Liquid Soap Base
Auto Soaps
Potash Oil Soap
Shampoo
U.S.P. Cresol Compound
Coal Tar Disinfectants
Liquid Soap
Pine Oil Soap
U.S.P. Green Soap
Shampoo Base
Pine Oil Disinfectants
Insecticides

Ask for samples of these specialty bulk products!

HARLEY SOAP CO.
2852 E. Pacific St. Philadelphia

Stearates
of UNIFORM QUALITY

ZINC
CALCIUM
ALUMINUM
MAGNESIUM

Stocks Carried at

New York
St. Louis
San Francisco
New Orleans
Chicago
Los Angeles
Des Moines
Kansas City

FRANKS CHEMICAL PRODUCTS CO.
Bush Terminal No. 8 Brooklyn, N. Y.

Where to buy

RAW MATERIALS AND EQUIPMENT

for the Manufacture of Soaps and Sanitary Products

NOTE: This is a classified list of the companies which advertise regularly in *Soap.* It will aid you in locating advertisements of raw materials, bulk and private brand products, equipment, etc., in which you are particularly interested. Refer to the Index to Advertisements, on the following pages, for page numbers. *"Say you saw it in SOAP."*

ADHESIVES

Grasselli Chemical Co.
Mechling Bros. Chemical Co.
National Adhesives Corp.
Philadelphia Quartz Co.
Standard Silicate Co.

ALKALIES

Columbia Alkali Co.
Diamond Alkali Co.
Dow Chemical Co.
Niagara Alkali Co.
Solvay Sales Corp.
Stauffer Chemical Co.
Warner Chemical Co.
Welch, Holme & Clark Co.

AROMATIC CHEMICALS

Antoine Chiris Co.
Dodge & Olcott Co.
Dow Chemical Co.
P. R. Dreyer, Inc.
E. I. du Pont de Nemours & Co.
Felton Chemical Co.
Benj. French, Inc.
Fritzsche Brothers, Inc.
Givaudan-Delawanna, Inc.
George Lueders & Co.
Magnus, Mabee & Reynard
Merck & Co.
Monsanto Chemical Works
Newport Chemical Works
Polaks Frutal Works
Schering Corp.
Solvay Sales Corp.
A. M. Todd Co.
Ungerer & Co.
Van Ameringen-Haebler, Inc.
Albert Verley, Inc.

BULK AND PRIVATE BRAND PRODUCTS

Alpine Chemical Co.
Baird & McGuire, Inc.
Chemical Compounding Corp.
Chemical Supply Co.
Clifton Chemical Co.
Davies-Young Soap Co.
Eagle Soap Corp.
Harley Soap Co.
Koppers Products Co.
Kranich Soap Co.
Edgar A. Murray Co.
Palmer Co.
John Powell & Co.
Ratin Laboratory
Geo. A. Schmidt & Co.
Stevens Soap Corp.
U. S. Sanitary Specialties Corp.
White Tar Co.
Windsor Wax Co.

CANS

Continental Can Co.
Metal Package Corp.
William Vogel & Bro.

CHEMICALS

Columbia Alkali Co.
Diamond Alkali Co.
Dow Chemical Co.
E. I. du Pont de Nemours & Co.
General Chemical Co.
Grasselli Chemical Co.
Mechling Bros. Chemical Co.
Merck & Co.
Monsanto Chemical Works
Newport Chemical Works
Niagara Alkali Co.
Philadelphia Quartz Co.
Solvay Sales Corp.
Standard Silicate Co.
Stauffer Chemical Co.
Joseph Turner & Co.
Victor Chemical Works
Warner Chemical Co.
Welch, Holme & Clark Co.

COAL TAR RAW MATERIALS

(Cresylic Acid, Tar Acid oil, etc.)

Baird & McGuire, Inc.
Barrett Co.
Koppers Products Co.
Monsanto Chemical Works
White Tar Co.

CONTAINERS

(See also Steel Containers)

Bemis Bros. Bag Co. (Bags)
Cincinnati Mailing Device Co. (Paper Cans)

DECOLORIZING CARBONS

Darco Sales Corp.
Durkee Famous Foods
Industrial Chemical Sales Corp.

DEODORIZING BLOCK HOLDERS

Eagle Soap Corp.
Palmer Co.
U. S. Sanitary Specialties Corp.
William Vogel & Bro.

ESSENTIAL OILS

Antoine Chiris Co.
Dodge & Olcott Co.
P. R. Dreyer, Inc.
Fritzsche Brothers, Inc.
Leghorn Trading Co.
George Lueders & Co.
Magnus, Mabee & Reynard
Polaks Frutal Works
A. M. Todd Co.
Ungerer & Co.
Van Ameringen-Haebler, Inc.
Albert Verley, Inc.

LABORATORY APPARATUS

Central Scientific Co.
Laboratory Construction Co.

(*Continued on Page* 142)

Consulting Chemists and Engineers

Specializing in Soaps, Disinfectants, Insecticides, Polishes, Etc.

FOSTER D. SNELL, A. M. Ph. D.
130 CLINTON ST., BROOKLYN, N. Y.
Consulting Chemist
RESEARCH ANALYSIS CONSULTATION OPERATION
SOAP, POLISH AND SPECIALTIES

"IF YOUR PROBLEMS HAVE ANY CONNECTION WITH SOAP oils, finishing materials, cosmetics, polishes or insecticides, we guarantee to solve them or
OUR SERVICE COSTS YOU NOTHING."
Illinois Chemical Laboratories, Inc.
1164 W. 22nd Street Canal 7313-7314
CHICAGO

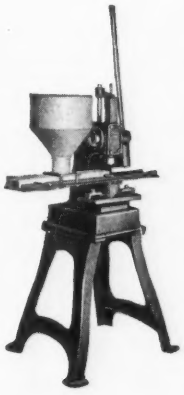
Charles H. LaWall Jos. W. E. Harrisson
LaWall & Harrisson
Chemists
Analytical—Consulting—Research
Phenol Coefficients
214 S. 12th St. Philadelphia

Skinner & Sherman, Inc.
246 Stuart Street, Boston, Mass.
Bacteriologists and Chemists
Disinfectants tested for germicidal value of phenol coefficient by any of the recognized methods.
Research—Analyses—Tests

HOUSTON LABORATORIES
F. R. ROBERTSON, Ph.C.
Analytical and Consulting Chemist
1206½ Preston Avenue HOUSTON, TEXAS
P. O. Box 132

PEASE LABORATORIES, INC.
39 West 38th Street, New York City
Chemical, Bacteriological, Sanitary and Physiological Investigations
Consultants on Technical Advertising, Literature and Labels

Ease in Operation



is the outstanding feature of the Huber hand-operated Para Block Press, permitting employment of female labor.

The model illustrated is mounted on firmly fixed legs which will not loosen up in operation even under hard use. The output compares favorably with any manually operated press.

The blocks turned out on the Huber press are attractive in appearance and their size and weight are instantly controllable by a micro-adjustment on the lower die.

Priced to conform with the standards of quality built into every Huber machine.

HUBER MACHINE CO.
262—46th Street, Brooklyn, N. Y.

Say you saw it in SOAP!

RAW MATERIAL and EQUIPMENT GUIDE

(*Continued from Page 140*)

NOTE: This is a classified list of the companies which advertise regularly in *Soap*. It will aid you in locating advertisements of raw materials, bulk and private brand products, equipment, etc., in which you are particularly interested. Refer to the Index to Advertisements, on the following pages, for page numbers. *"Say you saw it in SOAP."*

MACHINERY

Alsop Engineering Co. (Liquid mixing, filling and storage)
Edouard Battaille (Oil Hydrogenation)
Anthony J. Fries (Soap Dies)
Houchin Machinery Co. (Soap Machinery)
Huber Machine Co. (Soap Machinery)
Mixing Equipment Co. (Portable Mixers)
Proctor & Schwartz (Dryers)
C. G. Sargent's Sons Co. (Dryers)
Solutionizer Co. (Sudsing Equipment)
Sowers Mfg. Co. (Crutchers)
Stokes & Smith Co. (Packaging Machinery)
Sprout, Waldron & Co. (Conveyors, Mixers, etc.)
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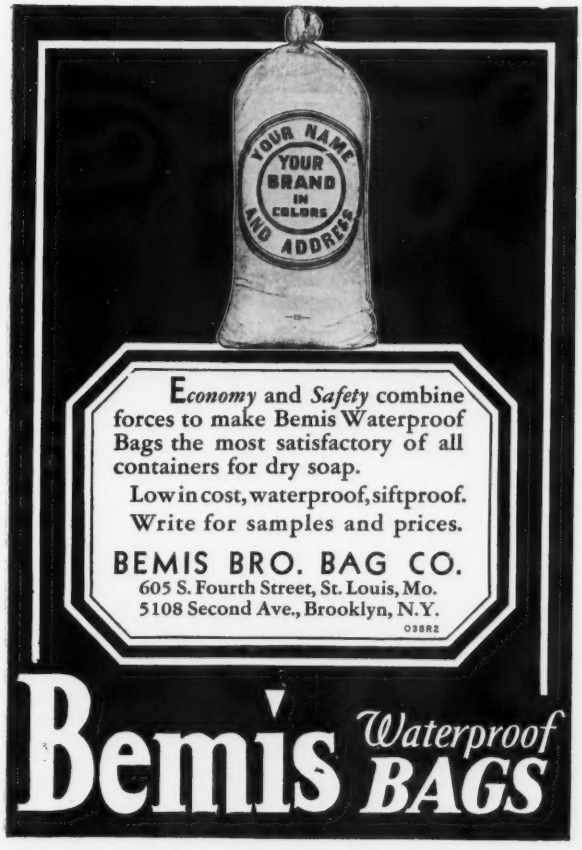

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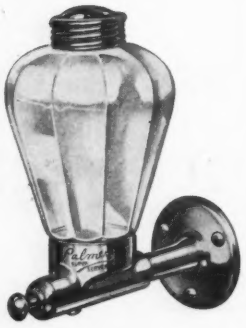

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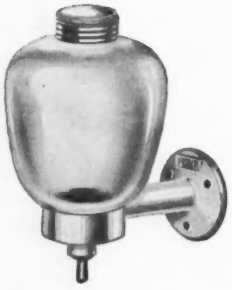

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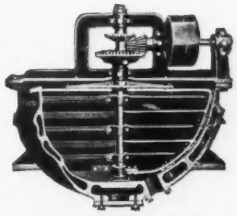

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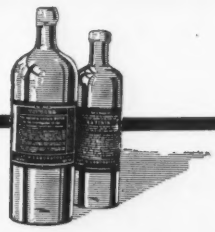

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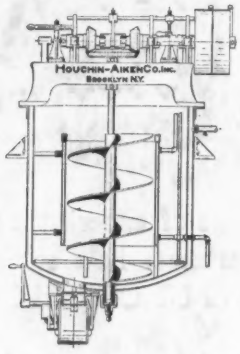
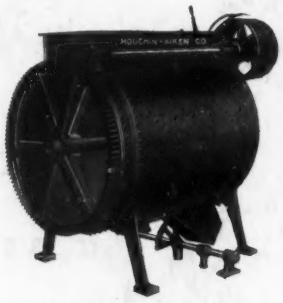
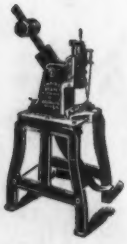


Perfection Crutcher Cross
Section View Plunger
Type Valve



Horizontal Crutcher



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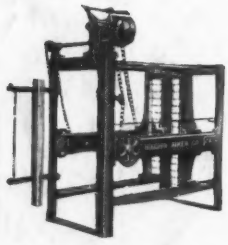

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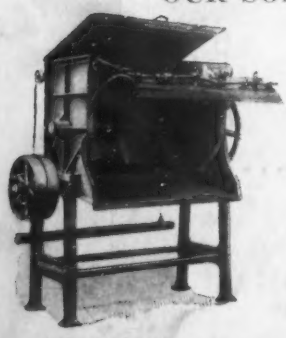

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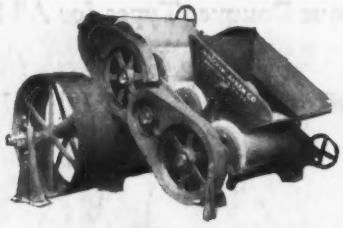

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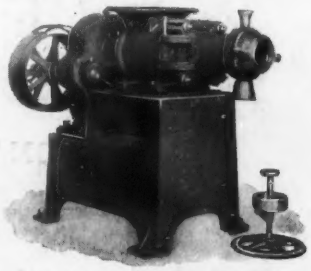

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